ARUP

National Trust

Castlefield Viaduct, Manchester

Geotechnical and Geoenvironmental Desk Study

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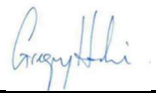
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Executive Summary

Ove Arup and Partners Ltd (Arup) has been commissioned by the National Trust to undertake a Geotechnical and Geoenvironmental Desk Study for the proposed Castlefield Viaduct (the site).

Earliest available mapping shows a bridge crossing the River Medlock adjacent to the Bridgewater Canal and wharf. A lower level railway viaduct associated with Manchester South Junction and Altrincham Railway, was built by the late 1840s and the higher level railway viaduct (Castlefield Viaduct) was built by the early 1890s. Heavy industry including cotton mills and dye works is shown in the surrounding Castlefield area associated with the canal and railway links.

Heavy industry shown on available historical maps in the surrounding area includes, but not limited to chemical works, cotton and paper mills, iron works, engineering works and a variety of warehouses.

At ground level at the proposed lift shaft, ground conditions are expected to comprise made ground consisting of sandy clay, brick fragments and ash, over weathered sandstone encountered at approximately 8m below ground level. Groundwater is in continuity with the River Medlock, encountered at approximately 6m below ground level.

Due to the likely presence of compressible soils associated with the River Medlock, it is assumed that piled foundations will be required for the proposed lift shaft and staircase.

At the viaduct level, ballast and vegetation is present, with the ballast described as angular to subangular granite ballast with hydrocarbon staining. Groundwater is not present.

Based on Arup's knowledge of existing ground investigation (GI) on the viaduct, hand dug pits were excavated at ten locations across the viaduct to a maximum depth of 0.3m below ground level (mbgl). HP101 encountered a timber sleeper at 0.25mbgl whilst the rest of the hand dug pits reached the metal base of the viaduct. The general stratum found consisted of grass over dark brown sandy gravel with occasional rootlets. The gravel is fine to coarse, angular to subangular granite ballast with hydrocarbon staining.

Possible sources of contamination at the site include the ballast along the viaduct, flaking paint from the steel viaduct structure in the east of the site and made ground associated with historical development at ground level. The conceptual site model identified potential risks to construction workers, future site users, groundwater and building materials.

Intrusive investigation is required to establish the extent and nature of chemical contamination to inform risk assessments, geotechnical assessment and foundation design. The geotechnical and geoenvironmental risk register identifies mitigation measures to be implemented as part of the proposed scheme to address identified ground-related risks.

The site has been classified at moderate to high risk of Unexploded Ordnance (UXO) so mitigation measures will be needed during the intrusive GI and piling works. The culvert, existing railway viaducts and associated retaining walls are considered sensitive structures. Structural condition surveys are recommended to be undertaken prior to any construction works to assess if there is any existing damage.

1. Introduction

1.1 Commission and scope

Ove Arup and Partners Ltd (Arup) has been commissioned by the National Trust to undertake a Geotechnical and Geoenvironmental Desk Study to inform the Castlefield Viaduct development in Manchester.

The objective of the Geotechnical and Geoenvironmental Desk Study is to review available historical, geotechnical and geoenvironmental information relevant to the site and the nearby surrounding area and to highlight any potential ground related risks to the proposed development. The Desk Study informs the scope and preliminary design of an intrusive ground investigation and potential constraints relating to the ground investigation. This document will be submitted to the Manchester City Council to support the planning application.

1.2 Sources of information

The following sources of data and information have been reviewed as part of this desk study:

- British Geological Survey (BGS) geological mapping and adjacent borehole records available via the online GeoIndex viewer [1];
- BGS geological mapping, 1: 10, 560, Sheet SJ 89 NW, 1976 **[2]**;
- BGS geological mapping, 1: 10, 560, Sheet SJ 89 NW, 2004 **[3]**;
- BGS Superficial and Bedrock geology, Manchester Sheet 85, 1: 50, 000, 2011 **[4]**;
- Department of Environment (DoE) Industry profiles (published in 1995) [5];
- National Library of Scotland (2023) Ordnance Survey Towns Plans of England and Wales / Scotland [6];
- Environment Agency Land Contamination: Risk Management [7];
- Royal Haskoning Phase 1 Surveys & Investigations - May 2021[8][9];

Details of the sources used are indicated in subsequent sections and are provided in the references section. Supporting information has been included in the appendices where appropriate.

1.3 Report structure

This report has the following structure:

- Section 2: Provides a description of the site in its current condition;
- Section 3: Documents the known site history and the geological and geoenvironmental setting;
- Section 4: Provides a summary of the key geoenvironmental constraints identified in relation to the proposed development;
- Section 5: Provides a summary of the key geotechnical constraints identified in relation to the proposed development;
- Section 6: Presents the geotechnical and geoenvironmental risk register; and
- Section 7: Presents conclusions of this assessment and recommendations for ground investigation.

1.4 Use and limitations of the report

This report was prepared by Arup on behalf of the National Trust (the Client) for Castlefield Viaduct, Manchester. It considers our client's instructions and requirements and addresses their priorities at the time.

This report is not intended for, and should not be relied on by any third party and no responsibility is undertaken to any third party in relation to it.

All reasonable skill, care and diligence have been exercised within the timescale available and in accordance with the technical requirements of the brief. Notwithstanding the efforts made by the professional team in preparing the report it is possible that other ground contamination or conditions as yet undetected may exist and consequently reliance on this report must be limited accordingly..

2. Site description

2.1 Site location and extent

The site is elevated on Castlefield viaduct approximately 150m south of Trinity Way; Egerton Street passes underneath the viaduct. The Bridgewater Canal is aligned parallel to the viaduct and connects to the River Irwell, which is situated approximately 200m to the west of the site. The site is bound to the north by Wilson Building and Potato Wharf, to the south by Bridgewater Canal and Egerton Street Bridge and to the west by commercial buildings and the River Irwell.

Castlefield Viaduct is a 330-metre long, grade II listed structure located within the Castlefield conservation area. The eastern 200m portion of viaduct comprises the National Trust public realm and gardens. Rail track has been removed on the remainder of the viaduct to the west and the surface contains railway ballast and other debris. There is currently only one point of entry from the Deansgate Tram Car Park, approximately 20 metres above ground level, which leads into an existing area of vegetation. To the south of the viaduct is the Metrolink line connecting Cornbrook to the west and Deansgate to the east.

The main structural elements of the viaduct are the longitudinal girders supporting the rails, spanning approximately 4m between transverse 'fish belly' girders. These fish belly beams extend transversely 11.5mto the lattice trusses' inner face, spanning the viaduct's full width. Deep lattice girders, measuring about 6m in height, span up to 53m between cast iron cylinders which are approximately 18m in height. These cylinders are filled with masonry for stability. Overhead bracing connects the tops of the lattice girders, while steel deck plates with waterproofing complete the structure, ensuring its durability and functionality.

The site is rectangular in shape covering an estimated 0.64ha and is centred on National Grid Reference SJ 82746 97482 as shown in Figure 1.



Figure 1: Site location

2.2 Topography

The topography of the site has been interpreted from Ordnance Survey Terrain 50 DTM data. The site is relatively flat and ranges between 24.5mOD to 27.5mOD, with the western section of the site ranging from 27.5mOD to 29mOD.

2.3 Utilities and drainage

A review of utility records for the area indicates utility corridors along Egerton Street. This includes electricity, gas, telecoms and sewer infrastructure running below the site and in areas adjacent to the site. For further information, refer to the latest available utility plans (*Castlefield Utilities – Combined.dwg [9]).*

2.4 Proposed development

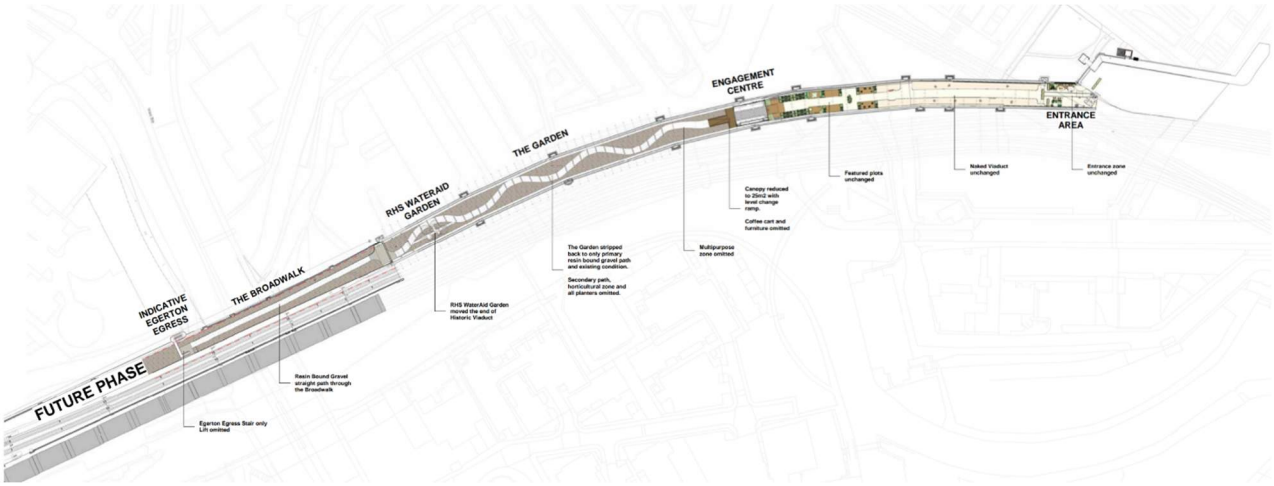


Figure 2: Indicative layout of proposed development

The proposed development at the site will comprise an urban park on the viaduct with garden areas and forms Phase 2 of the Castlefield Viaduct scheme. Ballast will be removed and will be replaced with either a topsoil or a mound with low cost and decorative grass, and a WaterAid Garden will also be installed. The steel spans which cross the viaduct at the east of the site will be remediated to remove and dispose any loose flaking paint. A new balustrade offset from the steel trusses will be installed as viaduct edge protection. There will be a resin bound gravel straight path through the Broadwalk and a lift shaft and staircase will be installed beneath the viaduct span to connect the urban park with the pavement on Egerton Street. The lift shaft and staircase are to be installed on piled foundations.

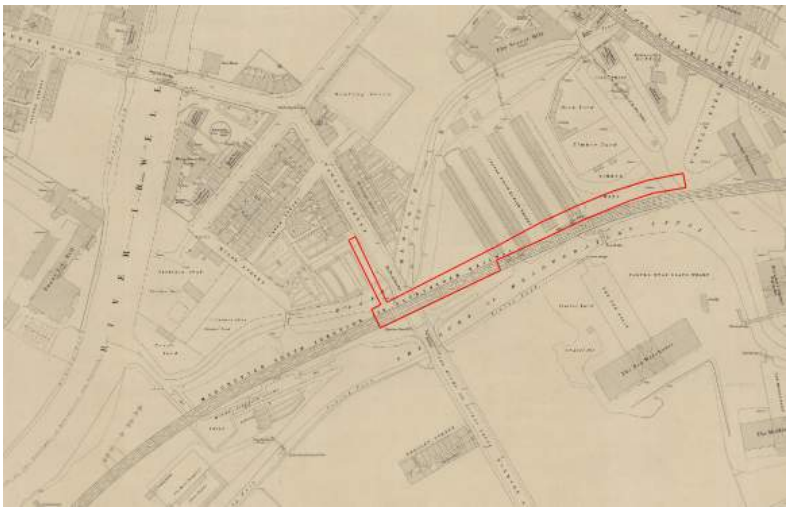
3. Site history and environmental setting

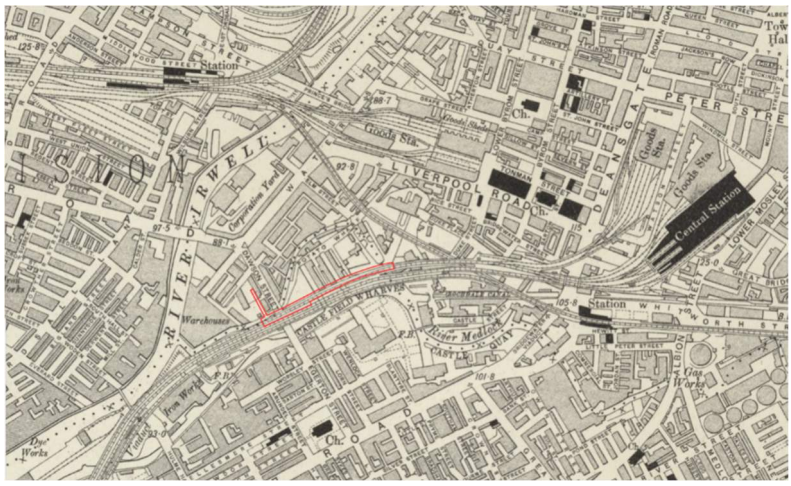
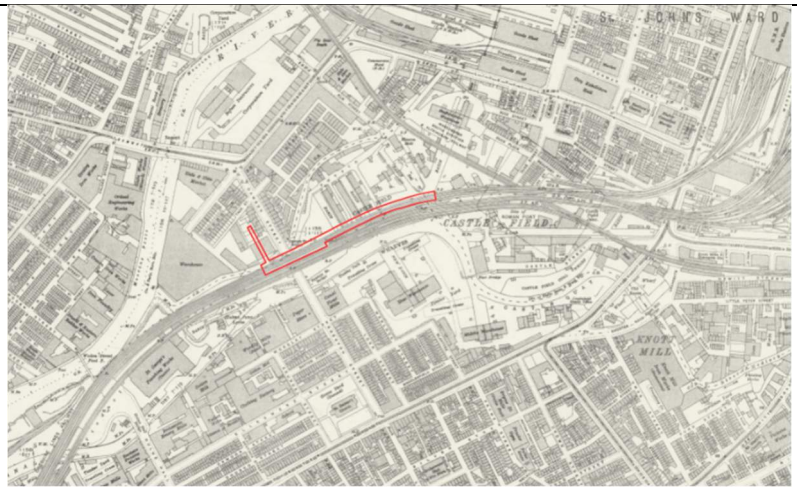
3.1 Site history

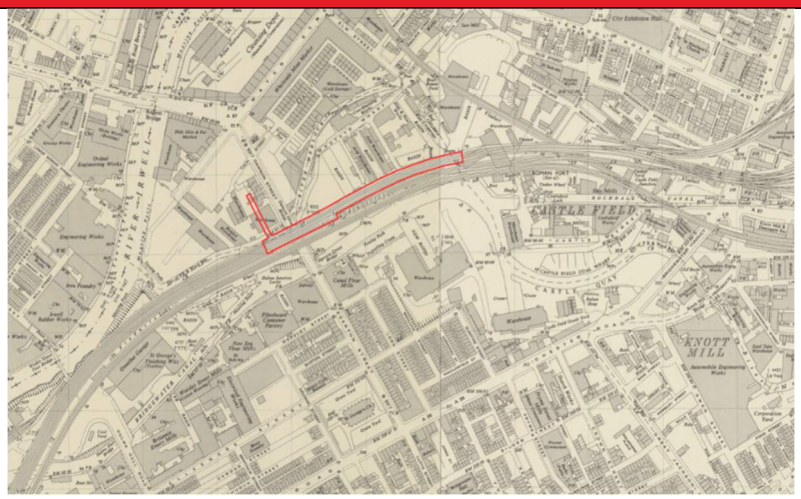
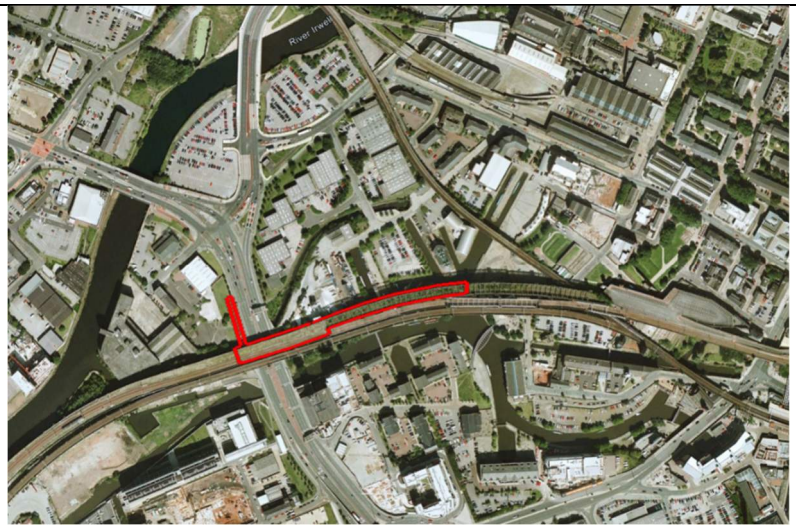
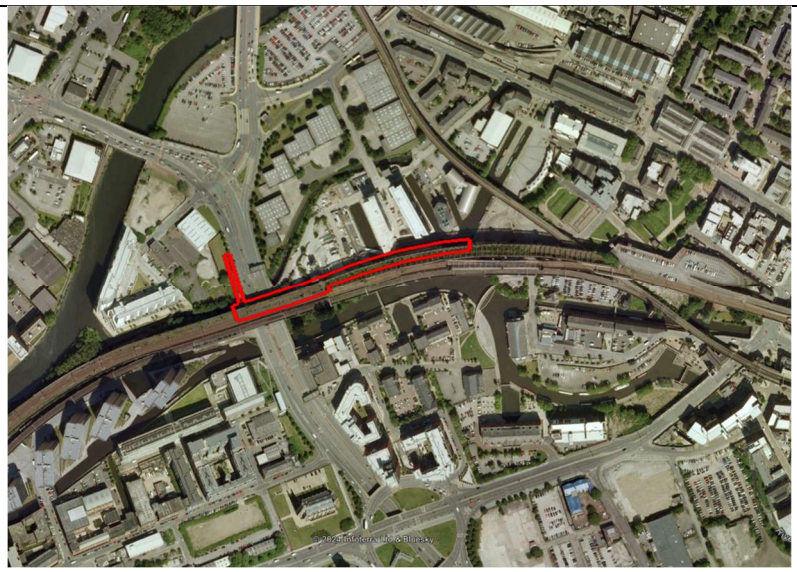
The history of the site has been summarised below based on historical mapping and aerial photography from Groundsure and Google Earth Pro. The following information has been reviewed:

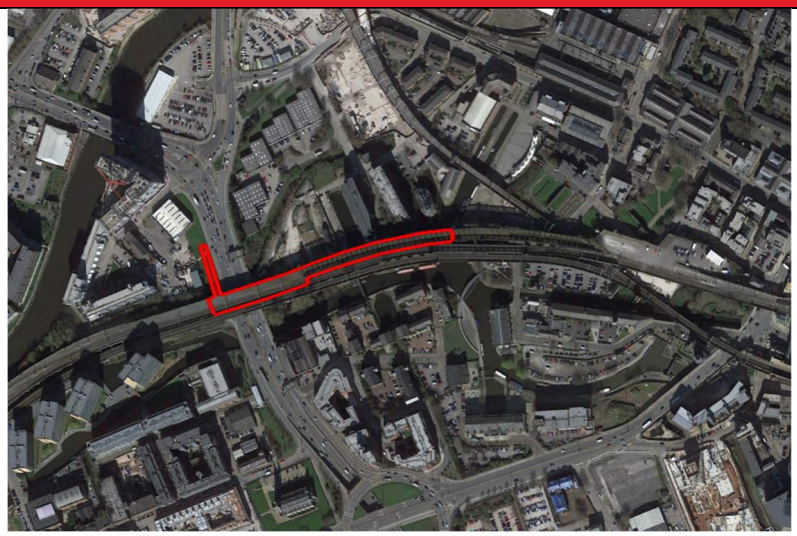
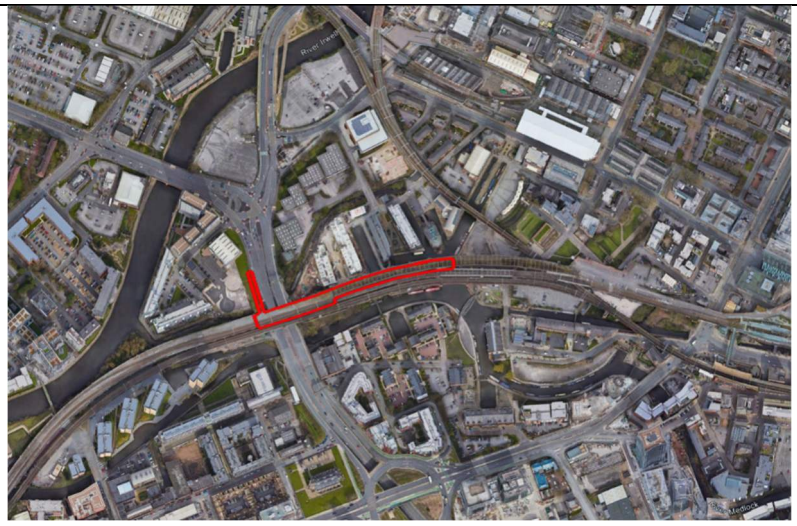
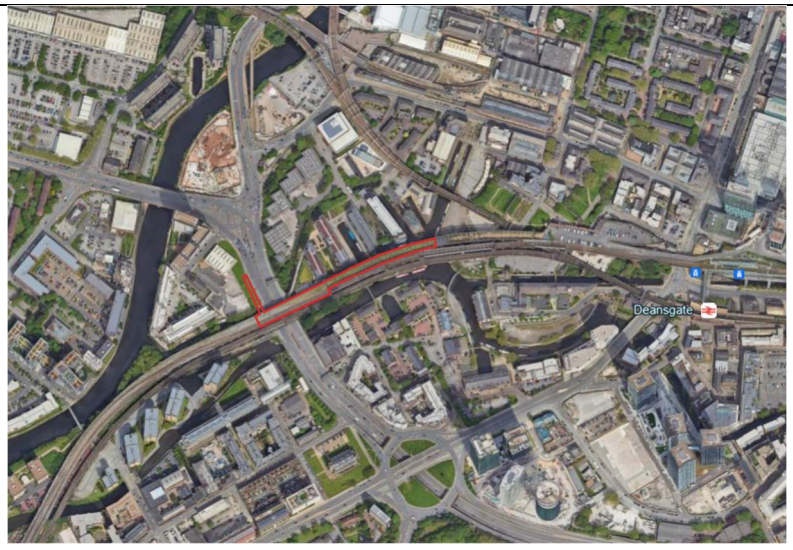
- National Library of Scotland Town Plans of England and Wales / Scotland [3];
- Google Earth imagery dating from 2003 to 2023;

Table 1: Summary of site history

Year	Map/aerial image extract	Observations
1848 National Library of Scotland		Dawson Street is present along the western edge of the site. Potato and Timber Wharfs, associated with the Bridgewater Canal are present in the east of the site. Surrounding the site is a gravel pit and heavy industry such as chemical works, silk, cotton and paper mills. A small number of residential houses are present off Dawson Street north of the site.
1851 National Library of Scotland Scale 1:2,640		A railway is shown immediately south of the Castlefield Viaduct. This railway viaduct, spanning Dawson Street, canal wharfs and Bridgewater Canal is associated with Manchester South Junction and Altrincham Railway. Present on the 1851 OS map, anecdotal information suggests construction was completed by late 1840s

Year	Map/aerial image extract	Observations
1895 National Library of Scotland Scale 1:500		The Castlefield Viaduct has been constructed. This railway viaduct is built at a slightly higher level, also spans Dawson Street, canal wharfs and Bridgewater Canal. Present on the 1895 OS map, anecdotal information suggests construction was completed by late 1892. More heavy industry (cotton mills and dye works) is shown 100m east of the site and slaughterhouses are shown 150m north of the site.
1909 National Library of Scotland		Warehouses occupy the Victoria Wharf area 50m west of the site. South of the canal, opposite the site are residential areas. Iron works are present 250m southwest of the site, on the opposite side of Bridgewater Canal. Manchester Central Station is shown in the east of the map is the end terminus of the railway line that uses the Castlefield Viaduct.
1922 National Library of Scotland		Potato wharf is occupied by basins. The corporation yard 250m north of the site has refuse destructors and there is a commercial hotel 250m northeast of the site. Opposite the Bridgewater Canal a towing path with travelling cranes, flour mills and a warehouse are shown.

Year	Map/aerial image extract	Observations
1944-73 National Library of Scotland Scale 1:2,500		There are acid warehouses directly northeast of the site with various warehouses to the northwest of the site also, including a bonded warehouse. There are an increased number of works and warehouses, including engineering works, a fireboard container factory, cotton weaving mills, textiles works and a brass foundry.
2003 Google Earth Imagery		The railway on Castlefield Viaduct and associated sidings are no longer shown. The railway ceased operations in the late 1960's with the closure of Manchester Central station located to the east of the viaduct. Dawson Street and Egerton Street are shown as part of the Manchester Ring Road. 100m north of the site are multistorey car parks, ground level car parks and industrial buildings. Warehouses in the Potato Wharf have been demolished are there are now street car parks.
2009 Google Earth Imagery		No significant changes within the red line boundary. The Vie building is constructed to the east of the site. There are residential buildings 50m east of the site.

Year	Map/aerial image extract	Observations
2017 Google Earth Imagery		No significant changes within the red line boundary. Construction work taking place for the One Regent apartment building approximately 150m northwest and a multistorey car park has been levelled 175m northeast of the site. Land 10m north of the site has been cleared.
2020 Google Earth Imagery		No significant changes within the red line boundary. Construction work taking place for the Wilson apartment building directly north of the site. 200m north of the site, a Self Storage and industrial Centre has been built.
2023-current Google Earth Imagery		No significant changes within the red line boundary. The ground level car parks located 200m north of the site have been cleared and construction is shown.
[1]*Reproduced with the permission of the National Library of Scotland*		

3.2 Geology

The following sources of information have been reviewed:

- British Geological Survey (BGS) geological mapping and adjacent borehole records available via the online GeoIndex viewer [1];
- BGS geological mapping, 1: 10, 560, Sheet SJ 89 NW, 1976 [2];
- BGS geological mapping, 1: 10, 560, Sheet SJ 89 NW, 2004 [3];
- BGS Superficial and Bedrock geology, Manchester Sheet 85, 1: 50, 000, 2011 [4];

3.2.1 Made ground

No made ground is shown on the geological map. Made ground is anticipated to be present at ground level from previous site development where the lift shaft and staircase will be installed.

3.2.2 Superficial deposits

The British Geological Survey (BGS) 1:10,560 map Sheet SJ 89 NW (2004) indicates Alluvium, glaciofluvial sheet deposits and glacial till are present with the area surrounding the site, but no superficial deposits are shown on the site itself.

3.2.3 Solid geology

Bedrock at the Site is sandstone of the Chester Pebble Beds Formation of the Sherwood Sandstone Group.

3.3 Historical ground investigation data

3.3.1 BGS borehole records

The British Geological Survey (BGS) online borehole database provides access to scans of borehole logs for previous ground investigations across the UK. A search has been carried out to access historical boreholes closest to the site.

Table 2: Nearby BGS borehole records.

Borehole ID	Location	Year	Comment
SJ89NW1297	<10m north	1991	Located west of Egerton Street below Castlefield Viaduct. Made ground (8.2m thick) over very weathered sandstone encountered approximately 8mbgl and proven to a depth of 10mbgl. Made ground described as brick and ash fill with iron foundry furnace slag recorded between 5.2 and 7.5 mbgl.
SJ89NW1980	<10m west	1991	Located centre of Egerton Street adjacent to Castlefield Viaduct. Made ground recorded as ash fill (2.4m thick) over very soft alluvial clays and loose sands (7.7m thick). Very weathered sandstone encountered approximately 10mbgl and proven to a depth of 16.7mbgl.
SJ89NW1300	25m south	1992	Borehole conducted adjacent to road bridge off a scaffolding platform. Made ground (6.5m thick) over alluvium (1.5m thick) over weathered sandstone encountered at approximately 8mbgl, proven to a depth of 20mbgl. Made ground described as clay with brick, concrete, coal and sandstone fragments.

3.3.2 Existing Ground investigation

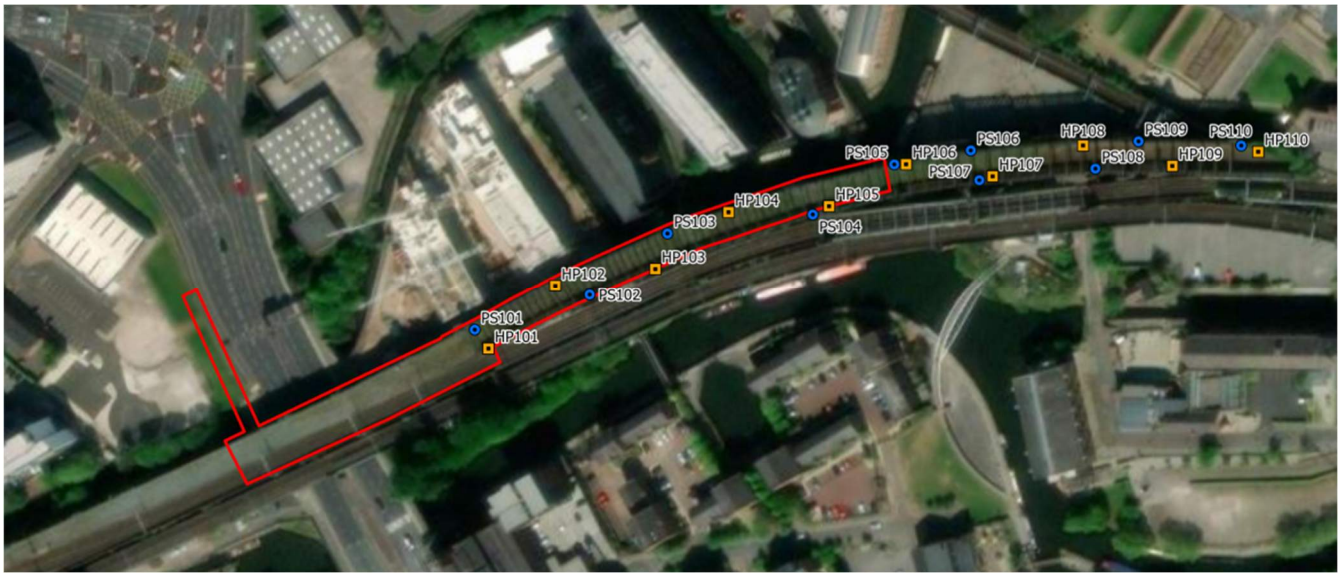


Figure 3: Existing GI Location Plan

For further information, see the Royal Haskoning DHV (2021) Castlefield Viaduct, Manchester, Land Quality Interpretive Ground Investigation and Generic Quantitative Risk Assessment Report [6]

During this investigation hand dug pits were excavated at ten locations across the viaduct to a maximum depth of 0.3m below ground level (mbgl). HP101 encountered a timber sleeper at 0.25mbgl whilst the rest of the hand dug pits reached the metal base of the viaduct. The general stratum found consisted of grass over dark brown sandy gravel with occasional rootlets. The gravel is fine to coarse, angular to subangular granite ballast with hydrocarbon staining.

3.4 Radon

The Groundsure Report indicates that there is a low risk from radon at the site, with less than 1% of properties exceeding the Radon Action Level. Therefore, no radon protective measures are deemed necessary for the site.

3.5 Hydrology and hydrogeology

The bedrock geology is classified as a Principal Aquifer. This is defined as layers with high intergranular and fracture permeability, usually providing a high level of water storage and may support water supply or river base flow on a strategic scale. The site is not within a source protection zone (SPZ). Groundwater was encountered at a depth of 22mOD in the nearest historic BGS borehole record.

The River Medlock is culverted beneath Egerton Street adjacent to the proposed lift shaft and the River Irwell is 150m west of the site.

3.6 Flooding

The Environment Agency (EA) flood mapping indicates the risk of flooding from rivers and the sea. From this, the area directly below the site is within flood zone 3 (high probability).

The EA dataset states the highest risk of surface water flooding is a 1 in 30-year rainfall event where surface water levels could be between 0.1m and 0.3m above existing ground level.

3.7 Environmental permits and incidents

Data on environmental permits, waste exemptions, licensed industrial activities and reported pollution incidents are included in the Groundsure report. None apply to the site or immediately adjacent sites.

3.8 Landfills

No recorded waste sites are located on site and waste sites in the wider surrounding area are not expected to be relevant to the proposed development.

3.9 Unexploded ordnance (UXO)

The site has been assessed to have a moderate to high risk and the assessment indicates that action to mitigate the risk is considered essential. As such the procurement of a Detailed UXO Risk Assessment Report should be obtained.

4. Preliminary geoenvironmental assessment

4.1 Approach

Land contamination can present an environmental liability and a constraint to site development. The principal UK legislation related to land contamination is contained within Part 2A of the Environmental Protection Act 1990. Only land where unacceptable risks are clearly identified, after a risk assessment has been undertaken in accordance with guidance, should be considered as meeting the Part 2A definition of contaminated land. In England policy relevant to site development is set out in National Planning Policy Framework (NPPF) (updated September 2023).

The central objectives of the land contamination regime across the UK are the prevention of significant harm, promotion of sustainable development and a "suitable for use" approach to land remediation. It is founded upon the promotion of a risk assessment approach to managing land contamination, focusing on establishing where risks to human health or the wider environment are unacceptable, and then taking appropriate and cost-effective action to deal with these risks.

Across the UK a source-pathway-receptor approach to contamination risk assessment and management is applied based upon the development of a conceptual model for the site, which identifies potential pollutant linkages. The "source" is defined as any contamination on the site, which may impact one or more "receptors", including people, plants, ecosystems, building materials and water resources. For there to be a contaminant linkage, and therefore a potential risk, there must be a "pathway" between the source and the given receptor. The conceptual site model (CSM) is used to articulate and systematically guide assessment of risks associated with contamination at the site.

For the purposes of this CSM, understanding of the site history and anticipated ground conditions have been used to identify the potential risks to human health and the groundwater environment.

This preliminary geoenvironmental risk assessment has been prepared to inform decisions related to possible sources of contamination identified at the site. The risk assessment follows the UK approach to assessing contaminated land as outlined in the Land Contamination: Risk Management guidance [7].

4.2 Possible sources

The Castlefield Viaduct has been used as railway land since the 1800s. The viaduct is covered in ballast and vegetation. Paint has been observed to be flaking off the steel spans on the viaduct in the east of the site. The land beneath the viaduct has historically been occupied by industrial land uses associated with the canal and railway line.

Where available, the Department of Environment (DoE) Industry Profiles [5] and existing ground investigation information [9] was used to identify possible contaminants and are summarised in Table 3.

Table 3: Possible contaminants based on sources of historical land use

Possible Source	Potential Contaminants	Comments
Ballast on viaduct structure	Asbestos Heavy metals Phenols Sulphates Polycyclic aromatic hydrocarbons (PAHs) Fuel oils, lubricating oils and greases	Ground investigation undertaken in the east of the site in 2021 [9] recorded elevated concentrations of lead and PAHs (chrysene and benzo(a)pyrene). No asbestos was detected in the samples analysed. Some hydrocarbon staining was observed on the ballast and soils were reported to have an oily/greasy feel. Soil leachate samples obtained in 2021 recorded elevated concentrations of lead and PAHs (fluoranthene and benzo(a)pyrene). No ground investigation information is currently available for the ballast in the west of the site, however contamination conditions are likely to be similar.

Paint flaked off from steel spans on viaduct structure	Heavy metals	Samples of paint were taken from the steel span during the 2021 ground investigation including those which cross the eastern part of the site. The paint was found to contain high concentrations of lead and zinc.
Made ground associated with historical development at ground level beneath viaduct structure	Asbestos Heavy metals Extremes of pH Hydrocarbons PAHs Sulphates	No site-specific ground investigation data is available. Available nearby historical BGS borehole logs indicate made ground is likely to contain ash fill with variable brick, concrete, coal, sandstone and iron foundry furnace slag.

4.3 Receptors

The proposed development involves the creation of an urban park along the viaduct with a lift shaft and stair access at ground level in the west of the site. Potential receptors both during construction and after completion of the development include:

- Construction workers and site neighbours during development;
- Future site users and maintenance/ ground workers of the new development;
- Groundwater within the Principal aquifer (Bedrock);
- Surface water within River Medlock and Bridgewater Canal; and
- Future building materials and utilities.

4.4 Pathways

Potential pathways that may be present during construction and operational phases of development include:

- Human health – ingestion of soils, dust or paint flakes;
- Human health – inhalation of dust, vapour or paint flakes;
- Human health – dermal contact with soils and groundwater;
- Controlled waters – leaching of contaminants from soils at ground level into groundwater;
- Controlled waters – leaching of contaminants from soil on viaduct and migration via surface drainage;
- Controlled waters – migration of dissolved phase contamination within groundwater;
- Controlled waters – migration via preferential pathway created by piling at ground level;
- Ground gas – ingress of ground gas into buildings;
- Building materials and utilities – direct contact with soils.

4.5 Contamination assessment

4.5.1 Soil human health risks

The viaduct is covered with a layer of ballast and ground investigation undertaken in the east of the site has identified the presence of elevated concentrations of metals and PAHs which could pose a potential risk to human health where site users come into contact with soil on site. The ballast will be removed from the viaduct and disposed off-site during the construction works. Clean soil will be imported to site to form soft landscaping areas of the urban park. Therefore, there will be no risk to future site users from contact with ballast as this potential source of contamination will be removed.

The steel spans on the viaduct which cross the eastern part of the site are covered in paint that has been identified as containing elevated concentrations of metals (lead and zinc). The paint has been observed to have deteriorated and flakes of paint are present on the ballast. There is a risk that future site users could be exposed to contaminants in the paint flakes by direct contact and ingestion pathways. During the development works the steel spans will be brushed down to remove any loose paint and all paint flake debris will be swept up and removed from site prior to installation of the urban park. While this will prevent paint flaking on the urban park in the short term, over the longer term there may be continued degradation of the steel span and any remaining paintwork may flake off and be deposited on the soil surface within the park. A new balustrade, spaced off the steel spans, will be installed within the park to prevent members of the public from getting too close to the paintwork. While exposure to the paint for future site users is possible it is considered unlikely that members of the public would be interfering with the paint work on the steel spans or disturbing the soils within the park where paint flakes may be present and therefore there will be a low risk to future site users from direct exposure to the viaduct paintwork.

Made ground is anticipated to be present at ground level where the lift shaft and stair access will be installed. The are immediately surrounding the access point at ground level will be covered in hardstanding which will prevent future site users from coming into direct contact with soils in this part of the site and therefore the risks to future site users are considered to be very low.

The biggest risk from interaction with soils onsite arises during the construction works, both on the viaduct and at ground level. There is a possibility that the made ground, ballast and paint flakes may pose a short-term risk to human health for the construction workforce via potential exposure pathways including dermal contact, dust/fibre inhalation and ingestion pathways outdoors. There is also a possible risk to site neighbours during construction via dust/fibre inhalation exposure pathways. Such risks can be mitigated by the contractor following standard good practice during construction and adoption of adequate health and safety procedures, including use of PPE. Appropriate working procedures would be incorporated into a construction environmental management plan (CEMP).

4.5.2 Controlled waters risk

The ballast layer on the viaduct has been identified as having potentially leachable contaminants. The ballast will be removed from the viaduct during the development therefore the risk of contaminants leaching out of the ballast and entering nearby surface watercourses via the surfaced drainage network on the viaduct is negligible.

Any contamination present in made ground at ground level where the lift shaft and stair access will be construct may pose a risk to controlled waters through leaching and transport in groundwater. The final development will be covered in hardstanding which will limit any infiltration and leaching of contaminants and therefore risks to controlled waters are considered to be low. Ground investigation will be undertaken to assess contamination conditions in this part of the site and further assessment will be undertaken if significant contamination is encountered.

Piling or deeper excavations at ground level has the potential to mobilise any contaminants in made ground and create a preferential migration pathway into groundwater in the underlying Principal aquifer (Chester Pebble Beds Formation). Available historical BGS borehole logs indicate that the made ground beneath the site may be in direct contact with the underlying bedrock and therefore piling may not create a new contaminant pathway. and the risk is considered low. The extent of soil contamination will be identified during ground investigation and if evidence of significant soil contamination is identified a piling works risk assessment will be prepared.

4.5.3 Buried structures and services

Buried structures and services may be at risk from corrosion or degradation as a result of the direct contact with contaminants in made ground and, for example, naturally elevated sulphate levels.

If any new buried structures or utilities are required at ground level, these risks can be mitigated by the selection of appropriate materials for buried services and concrete design. Risks to buried structures and services requires assessment in the context of ground contamination at the site.

4.5.4 Summary of conceptual site model

A summary of the plausible pollutant linkages requiring assessment in relation to the site is presented in Table 4.

Table 4: Summary of conceptual model

Sources		Pathways		Receptors	Comments
Ballast on the viaduct	→	Direct exposure via dermal contact, ingestion or inhalation of soils, dust or fibres	→	Site workers during construction and site neighbours	Ground investigation undertaken to date has identified the presence of elevated concentrations of metals and PAHs within the ballast. No elevated concentrations of volatile contaminants have been recorded. Ground investigation to be undertaken in west of the site to assess contamination conditions. Appropriate site management protocols to be adopted during construction works.
		Inhalation of volatile contaminants	X		
	X	Direct exposure via dermal contact, ingestion or inhalation of soils, dust or fibres	→	Future site users and maintenance workers	The ballast will be removed from the viaduct and disposed off-site during construction works. Soft landscaping areas within the urban park will be created using imported clean soil cover.
	X	Leaching of contaminants and migration via surface water drainage network	→	River Medlock, Bridgewater Canal	The ballast will be removed from the viaduct and disposed off-site during construction works. Therefore, there will no source of leachable contaminants.
Paint flakes on viaduct steel spans	→	Direct exposure via dermal contact, ingestion or inhalation of paint	→	Site workers during construction and future maintenance workers	Appropriate site management protocols to be adopted during construction and maintenance works.
				Future site users (members of public)	Paintwork to be brushed down and debris removed during construction which will reduce risk of flaking paint in short term, however longer-term deterioration could still occur. Balustrade to be installed to prevent members of the public from coming into close contact with the paintwork. Exposure is possible but unlikely that future site users would be interfering with paintwork.
Made ground at ground level	→	Direct exposure via dermal contact, ingestion or inhalation of soils, dust or fibres	→	Site workers during construction and site neighbours Maintenance workers	Site-specific ground investigation information to assess contamination conditions is not available. Ground investigation to be undertaken. Appropriate site management protocols to be adopted during construction and maintenance works.
		Inhalation of volatile contaminants	→		

Sources		Pathways		Receptors	Comments
Made ground at ground level	→	Direct exposure via dermal contact, ingestion or inhalation of soils, dust or fibres	X	Future site users	Site-specific ground investigation information to assess contamination conditions is not available. Ground investigation to be undertaken to assess ground conditions. Hard standing on ground surface will prevent future site users from coming into direct contact with soils.
	→	Creation of preferential migration pathway via piling	→	Groundwater within bedrock geology (Principal aquifer)	Site-specific ground investigation information to assess contamination conditions is not available. Ground investigation to be undertaken. Historical borehole records indicate that made ground directly overlies the sandstone bedrock and therefore piling is unlikely to create a new migration pathway. Further assessment following ground investigation and confirmation of foundation design. If evidence of significant soil contamination is encountered, a piling works risk assessment would be prepared.
Leachable contaminants in the made ground at ground level	X	Vertical migration of dissolved phase contamination	→	Groundwater within bedrock geology (Principal aquifer)	Site-specific ground investigation information to assess contamination conditions is not available. Ground investigation to be undertaken. The final development will be covered in hardstanding which will limit infiltration and leaching of any contaminants. No further assessment unless ground investigation identifies significant soil contamination.
		Lateral migration of dissolved phase contamination in groundwater	→	River Medlock and Bridgewater Canal	
Soils aggressive to building materials at ground level	→	Direct contact with aggressive soils	→	Buried concrete Buried water supply pipes	Ground investigation is recommended to assess whether contaminated soils are present. Selection of appropriate concrete design and materials for buried services.

5. Engineering considerations

5.1 Ground model

Using available ground investigation information, a preliminary ground model for the site is presented below for the western end of the scheme near the proposed lift shaft and staircase.

Table 5: Ground model summary based on nearby BGS borehole record SJ89NW1297.

Strata	Description	Top mbgl (Elevation mOD)	Base mbgl (Elevation mOD)	Thickness (m)
Made Ground	Firm brown sandy clay with brick fragments and ash. Layer of iron foundry furnace slag observed at 6.2m to 7.5m.	0.0 (27.72)	8.2 (19.52)	8.2
Weathered Sandstone	Brown fine to medium grained highly weathered sandstone.	8.2 (19.52)	10.0 (17.72)	1.8
Sandstone	Weak reddish brown medium grained sandstone.	10.0 (17.72)	Not proven	Not proven

Although not observed in the nearest historic BGS borehole records, alluvium deposits associated with the River Medlock (soft organic sands and clays) may be present underlying the made ground.

Groundwater level is expected to be in connection with the River Medlock and was encountered at a depth of 5.7m (22mOD) in the nearest historic BGS borehole record.

5.2 Existing structures

A culvert and two railway viaducts are in proximity to the proposed lift location. The lower level railway viaduct associated with Manchester South Junction and Altrincham Railway, was built by the late 1840s and the higher level railway viaduct associated with the Cheshire Lines Committee was built by the early 1890s.

The Egerton Street bridge which culverts the River Medlock below is located below the western extent of the Castlefield Viaduct. The bridge and culvert extents may have been widened during the construction of the Manchester Ring Road completed in early 2000s. The northern arch of the bridge is located approximately 15m north of the proposed lift shaft and the brick abutment is located approximately 10m away.

The lower level railway viaduct has vertical red brick bridge piers are assumed to be founded in the bedrock approximately 7mbgl in this location. The closest bridge pier is located approximately 15m away from the proposed lift shaft.

The higher level railway viaduct, built within the earlier phases of the Castlefield Viaduct is immediately adjacent to the proposed lift shaft. The blue engineered brick bridge arches and piers are assumed to be founded in the bedrock approximately 8mbgl in this location. Between the blue engineered brick bridge piers are red brick retaining walls, retaining over 8m of variable made ground materials. Both the brick viaduct piers and the retaining walls are estimated to be similar in age, predating the opening of the Castlefield viaduct in 1892.

The culvert, existing railway viaducts and associated retaining walls are considered sensitive structures. Structural condition surveys are recommended to be undertaken prior to any construction works to assess if there is any existing damage.

5.3 Buried obstructions, soft ground and voids

Other than the structures listed in the previous section, no other structures or buildings have been constructed in the location of the proposed lift.

The northern extension of the red line boundary, there have historically been residential houses and a warehouse that have been present on site. Relict foundations from historical structures may be present below existing ground levels.

It is likely that obstructions may be located in the area of the proposed lift, such as the retaining wall foundation which may be corbelled at depth.

The composition of made ground is variable, it will likely contain cobbles and in some locations contain iron foundry furnace slag (a dense granular deposit) as observed in BGS borehole record SJ89NW1297 in a thickness of 1.3m (see Table 4).

Voids may be associated with any period of uncontrolled backfilling, redundant utilities or any partially infilled basements associated with historical development in the northern extent of the site.

Historical poor backfilling of made ground may lead to the presence of shallow localised soft spots. The presence of soft alluvial clays given the proximity to watercourse may also be present.

Buried obstructions, soft spots and voids may impact temporary works and foundation solutions, and their presence should be investigated as part of an intrusive ground investigation.

5.4 Shallow Groundwater

In the location of the lift shaft and stairwell, groundwater level is expected to be in connection with the River Medlock and was encountered at a depth of 5.7m (22mOD) in the nearest historic BGS borehole record.

Given the historical development at the site, there is also potential for shallow perched ground water within the made ground and residual substructures.

The ground investigation should include the installation of standpipes to allow ground water levels to be determined and monitored.

For the remainder of the Castlefield Viaduct scheme at viaduct level, the presence of groundwater does not need to be considered.

5.5 Foundations

Lateral spatial constraints due to proximity to the blue engineering brick arches and pier of the Castlefield Viaduct and the variable made ground materials present, a shallow foundation is not considered to be practical. A piled foundation is the preferred foundation solution transferring load to more competent sandstone, located approximately 8m below existing ground levels.

Given the proximity to sensitive structures, described in Section 5.2, the design of piled foundations / lift pit excavation will have to limit vibration, in addition to considering limited headroom associated with the Castlefield Viaduct above.

At this early design stage, a 450mm bored pile is considered feasible with a restricted headroom piling rig to install pile foundations undeath the viaduct. Sectional flight auger piling may be required where headroom for the piling rig mast and auger is restricted. Confirmation of the pile arrangement, diameter and length will be undertaken at detailed design.

5.6 UXO

The site has been assessed to have a moderate to high risk and the assessment indicates that action to mitigate the risk is considered essential. A Detailed UXO Risk Assessment Report should be obtained.

6. Geotechnical and geoenvironmental risk register

Register reference – Castlefield Viaduct, Manchester Geotechnical and Geoenvironmental Risk Register

Project	Castlefield Viaduct	**Job number**	282210-00
Package/ topic	Desk Study	**Design stage**	For Information

Remember: Avoid – Reduce – Control and communicate relevant information to others

Date (+ initials)	Area/location of risk exposure	Description of hazard and risk exposure	Mitigation of risk (potential or achieved)	A	R	C	Further action	By	Status Active/closed
26/07/24 ZK	Lift shaft Stair case	Buried obstructions or voids impacting time and cost of ground investigation and construction activities.	Ground investigation to assess extent of buried obstructions on site.			✓	Once risk is established during ground investigation, foundation technique to consider the potential for encountering obstructions.	Arup/ Contractor	Active
26/07/24 ZK	Site wide	Risk of clashing with utilities during ground investigation and construction works.	Obtain utility plans/GPR survey in advance of ground investigation.			✓	Designer to avoid known services where possible. Contractor to take appropriate precautions during works.	Client/ Contractor	Active
26/07/24 ZK	Viaduct	Contamination causing risk to human health of workers during construction.	Appropriate working methods and health and safety protocols to be adopted during construction to prevent exposure to potential contaminants. Additional ground investigation to be undertaken to assess contamination of ballast in the west of the site.			✓	Undertake risk assessment on basis of additional ground investigation findings. Appropriate working methods to be incorporated into CEMP.	Arup/ Contractor	Active
26/07/24 ZK	Ground level	Contamination causing risk to human health of workers during construction.	Appropriate working methods and health and safety protocols to be adopted during			✓	Undertake risk assessment on basis of additional ground investigation findings.	Arup/ Contractor	Active

Register reference – Castlefield Viaduct, Manchester Geotechnical and Geoenvironmental Risk Register

Project	Castlefield Viaduct	**Job number**	282210-00
Package/ topic	Desk Study	**Design stage**	For Information

Remember: Avoid – Reduce – Control and communicate relevant information to others

Date (+ initials)	Area/location of risk exposure	Description of hazard and risk exposure	Mitigation of risk (potential or achieved)	A	R	C	Further action	By	Status Active/closed
			construction to prevent exposure to potential contaminants. Ground investigation to be undertaken to assess contamination.				Appropriate working methods to be incorporated into CEMP.		
26/07/24 ZK	Lift shaft and stair case at ground level	Contamination causing risk to water environment.	Ground investigation to assess ground conditions			✓	If evidence of significant soil contamination is encountered, collect groundwater samples for geoenvironmental testing.	Arup/ Contractor	Active
26/07/24 ZK	Lift shaft and stair case at ground level	Migration of contamination into underlying aquifer due to foundation piling.				✓	If evidence of significant soil contamination is encountered, prepare a piling works risk assessment.	Arup/ Contractor	Active
26/07/24 ZK	Lift shaft Stair case	Shallow groundwater impacting construction works	Undertake groundwater monitoring during ground investigation			✓		Arup/ Contractor	Active
26/07/24 ZK	Site wide	Risk of encountering unexploded ordnance (UXO) during ground investigation and construction works.	Detailed UXO Risk Assessment to be carried out			✓	Follow recommendations of Stage 2 Detailed UXO Risk Assessment.	Client/ Contractor	Active
26/07/24 ZK	Lift shaft and stair case at ground level	Potentially high sulphate concentration in the ground can attack any proposed buried infrastructure.	Collect samples for BRE Special Digest 1 testing.			✓	Concrete sulphate class to be designed following ground investigation.	Arup/ Contractor	Active

Register reference – Castlefield Viaduct, Manchester Geotechnical and Geoenvironmental Risk Register

Project	Castlefield Viaduct	**Job number**	282210-00
Package/ topic	Desk Study	**Design stage**	For Information

Remember: Avoid – Reduce – Control and communicate relevant information to others

Date (+ initials)	Area/location of risk exposure	Description of hazard and risk exposure	Mitigation of risk (potential or achieved)	A	R	C	Further action	By	Status Active/closed
26/07/24 SC	Lift shaft Stair case	Damage to sensitive structures (bridge, retaining walls, viaducts) which may risk further damage and collapse	Conduct structural condition survey prior to construction works.		✓	✓	Selection of foundation technique to reduce vibration.	Arup/ Contractor	Active

7. Conclusions and recommendations

7.1 Conclusions

Based on a review of the available data, ground conditions on site are expected to comprise of made ground consisting of sandy clay, brick fragments and ash. There is a layer of iron foundry furnace slag observed at 6.2m to 7.5m depth, with weathered sandstone below. Groundwater is likely in connection with the River Medlock, encountered at approximately 5.7mbgl around the lift shaft location. For the remainder of the Castlefield Viaduct scheme at viaduct level, the presence of groundwater does not need to be considered.

The viaduct is covered in ballast and vegetation.

Earliest available mapping shows a bridge crossing the River Medlock adjacent to the Bridgewater Canal and wharf. A lower level railway viaduct associated with Manchester South Junction and Altrincham Railway, was built by the late 1840s and the higher level railway viaduct (Castlefield Viaduct) was built by the early 1890s. Heavy industry is shown in the surrounding Castlefield area associated with the canal and railway.

Heavy industry shown on available historical maps in the surrounding area includes, but not limited to chemical works, cotton and paper mills, iron works, engineering works and a variety of warehouses. These may pose a constraint to future development.

Due to the likely presence of compressible soils to significant depths, it is assumed that piled foundations will be required for the proposed lift shaft and staircase.

Possible sources of contamination at the site include the ballast along the viaduct, flaking paint from the steel viaduct structure in the east of the site and made ground associated with historical development at ground level. The conceptual site model identified potential risks to construction workers, future site users, groundwater and building materials.

Intrusive investigation is required to establish the extent and nature of chemical contamination to inform risk assessments, as well as informing geotechnical assessment and foundation design. The geotechnical and geoenvironmental risk register identifies mitigation is available and can be implemented as part of the proposed scheme to address all identified ground-related risks. A detailed UXO Risk Assessment Report should be obtained prior to intrusive works.

7.2 Recommended outline scope of ground investigation

It is recommended that a development specific intrusive ground investigation specific is undertaken.

Ground investigation objectives include the following:

Location A (on the viaduct)

- Excavation of 5 No. hand dug pits in the west of the site to a maximum depth of 0.3mbgl for ballast sampling and contamination testing;
- Collection of soil samples for laboratory geoenvironmental testing;

The 2021 ground investigation data for the eastern part of the viaduct is considered sufficient to inform the risk assessments.

Location B (beneath viaduct span)

- Excavation of 1 No. cable percussion boreholes with rotary follow on boreholes to a maximum depth of 15mbgl. Initial hand dug trial pit excavation required for utility detection;
- 1 No. machine dug trial pit to maximum 4.5m depth below ground level to establish retaining wall and viaduct pier foundation geometry;
- Collection of soil samples for laboratory geotechnical and geoenvironmental testing;
- Production of a combined factual report on the ground investigation covering both locations.

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Appendix A

Curtins Phase 1 Ground Conditions Report

Appendix B

Royal Haskoning Land Quality Desk Study and Preliminary Risk Assessment

Appendix C

Land Quality Interpretive Ground Investigation and Generic Quantitative Risk Assessment Report









Embassy Village, Manchester

Phase 1 Preliminary Risk Assessment

Sophos International

Curtins Ref: 077442-CUR-00-XX-RP-GE-001

Revision: V02

Issue Date: 09 March 2021

Client Name: Embassy

Client Address: c/o The Message Trust, Lancaster House, Harper Road, Sharston Industrial Area
Manchester, M22 4RG

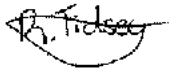
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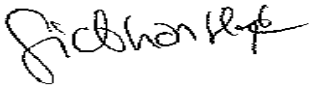
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Rev	Description	Issued by	Checked	Date
V01	Issue of report	RT	RA	19 Feb 2021
V02	Update of report to further reference River Medlock on northern boundary	SH	RA	09 March 2021

This report has been prepared for the sole benefit, use, and information for the client. The liability of Curtins Limited with respect to the information contained in the report will not extend to any third party.

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Executive Summary

Appointment	In January 2021 Curtins were instructed by Embassy to undertake a Phase 1 Preliminary Risk Assessment of land under Castlefield Arches off Dawson Street, Manchester, M15 4NU. The site is centred on NGR SJ 82746 97482 and covers an area of approximately 0.64 Ha. It is understood that the proposed site development is for new permanent accommodation with facilities.
Current Site Status	The site is located under and adjacent to masonry railway arches with a railway overhead. The site is bound by the Bridgewater canal at the south and River Irwell at the north. Some of the arches on the east of site are infilled with commercial units the remainder of the arches are open and vacant. The site is accessed off Edgerton Street at the east of site, the access road slopes moderately towards the west on to site, the topography is then relatively level with the surface covered by hardstanding.
Site History	Earliest mapping (1848) shows that the site was undeveloped land with the River Irwell present to the northwest boundary. The site was developed by 1896 and was occupied by railway masonry arches with surrounding residential and commercial development. The site remains as railway arches to present day. The warehouse which was located 10m north of the site seems to have been partly destroyed by 1950 and is then recorded as flats and offices by 2006 to present day. Throughout the site's history, its surroundings are generally occupied by commercial development and some residential properties with some contaminative potential.
Geology	BGS mapping indicates the site is underlain by Chester Formation bedrock. There are no BGS records for the superficial deposits. The BGS records four boreholes onsite with two available. One located within the northeast corner advanced to a depth of 10.00m bgl with bedrock encountered from 8.20m bgl. Another in the southeast corner advanced to 17.66m bgl with bedrock encountered from 6.40m bgl. The site is located in a low probability radon area where <1% of homes are estimated to be at or above the radon Action Level.
Hydrogeology	The site is underlain by a Principal Aquifer associated with the bedrock formation. The BGS records does not have any records for the aquifer within the superficial deposits. The site is not located within a Source Protection Zone (SPZ). There are no potable groundwater abstraction point located within 1km of the site.
Hydrology	The nearest surface water feature is the River Irwell and the Bridgewater Canal located adjacent to the north, south and western boundaries of the site. There is one surface water abstraction point located 135m west. There are 24 discharge consents within 250m of the site the nearest recorded 11m northeast. 10 pollution incidents have been recorded within 250m of the site, the nearest recorded 54m southwest.
Unexploded Ordnance Risk	The risk from UXO associated with WWII bombing to construction workers is considered to be **Moderate to High.**
Initial Ground Contamination Assessment	The risk from Made Ground posed to the site's end-users and groundwater is considered to be **Moderate** due to Made Ground being recorded in close proximity to the site and the sites current use. The risk posed to surface water is considered to be **Moderate/Low** due to the site's proximity to the nearest surface water feature and expected Made Ground present. The risk posed to site end-users from ground generating gases arising from organic / putrescible soils and infilled land (non-water) near the site is considered to be **Moderate**.
Recommendations	The following recommendations are made with regards to further works at the site: 1. Obtain a Detailed UXO Risk Assessment Report prior to any intrusive works being undertaken at the site; 2. Undertake an intrusive ground investigation; 3. Undertake a GQRA as part of the ground investigation; and 4. Undertake Ground Gas Monitoring over a period of two-three months for methane, carbon dioxide, oxygen, hydrogen sulphide, gas flow in l/hr, weather conditions and barometric pressure (with confirmation if falling, steady or rising). It is further recommended that this work is completed in advance of any development works taking place.

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Appendices

Appendix A **Drawings**

Appendix B **Envirocheck Report**

Appendix C **Qualitative Risk Assessment Rationale**

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1.0 Introduction

1.1 Project Background

In January 2021 Curtins were instructed by Embassy to undertake a Phase 1 Preliminary Risk Assessment of land under Castlefield Arches located off Dawson Street, Manchester, M15 4NU.

The location and extent of the site is shown in *Figure 2.1* on the following page. It is understood that the proposed site development is for new permanent accommodation with facilities. A proposed site plan is included in *Appendix A*.

1.2 Scope of Services

The Phase 1 PRA is intended to provide an overview of the geo-environmental and geotechnical setting of the site, prior to the proposed development of the site.

Proposed development drawings for the site are included in *Appendix A*.

Through this overview, the Phase 1 PRA aims to develop both a working conceptual and ground model for the site, as well as present an initial assessment of any risks that could be presented to the development including its intended end users and the wider environment.

Specifically, the Phase 1 PRA provides an initial assessment of the site regarding:

a) Potential on and offsite contamination from historical and/or current uses, including potential ground gas generating sources;
b) The potential impact on the wider environment by historical and or current use of the site of interest;
c) The potential impact from surrounding land uses and other environmental factors;
d) Potential problems associated with geological features such as faulting, mineral extraction, mining and land instability; and
e) The location of apparent sub-surface structures that may affect the proposed redevelopment.

Consideration of detailed flood risk, ecology and archaeological issues are outside of the scope of this report.

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2.0 Current Site and Surrounding Area Details

2.1 Site Location and Current Details

Site use, location and description are shown below in *Table 2.1* and *Figure 2.1*.

Table 2.1 – *Site Details*

Site Address	Dawson Street, Manchester, M15 4NU
NGR	SJ 82746 97482
Area of Site	Approximately 0.64 Ha
Current Site Use and Description	The site is located under and adjacent to masonry railway arches with a railway overhead. The site is bound by the Bridgewater Canal at the south and the River Medlock to the north. Some of the arches on the east of site are infilled with commercial units, the remainder of the arches are open and vacant. The site is accessed off Edgerton Street at the east of site, the access road slopes moderately towards the west on to site, the topography is then relatively level with the surface covered by hardstanding.

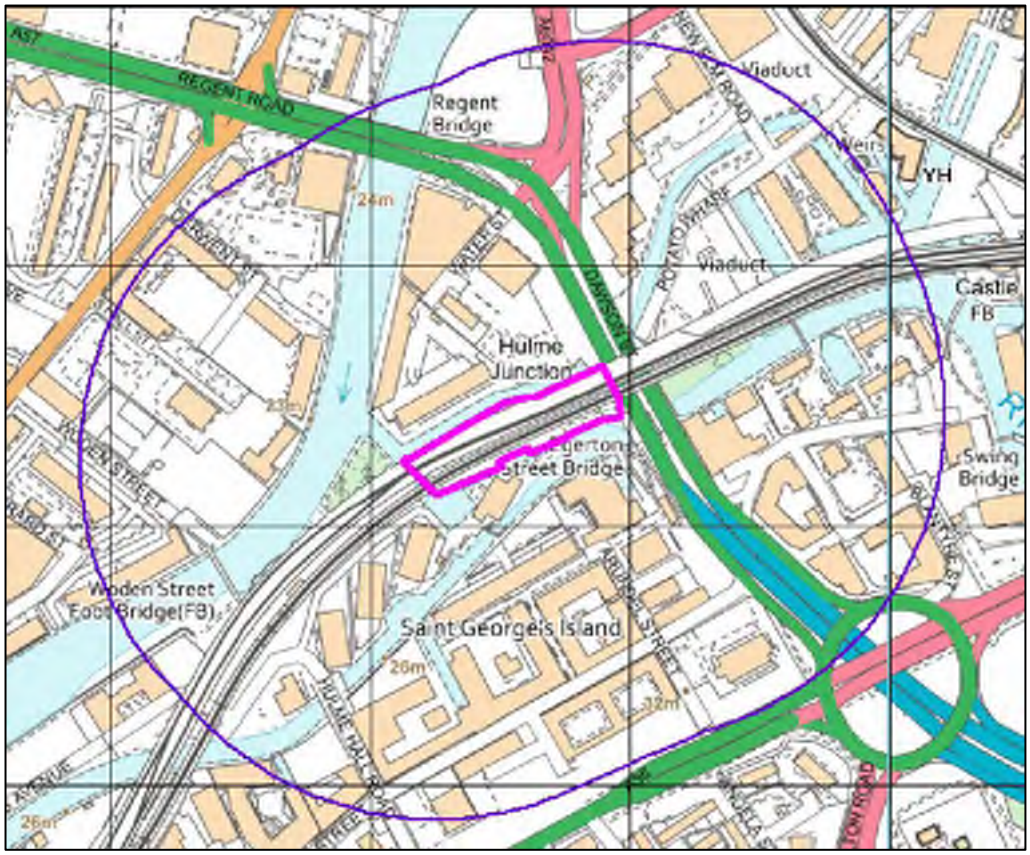


Figure 2.1 *– Site Location Plan (site boundary shown in pink and 250m buffer in purple). Crown Copyright. License Number 100022432.*

2.2 Surrounding Area Details

The following information was established through undertaking an environmental database search (Envirocheck report (Ref. 1) included in *Appendix B*).

Table 2.2 – *Surrounding Land Uses*

Surrounding Area	**N**	The River Medlock with flats and office buildings with car parking, the River Irwell beyond,
	E	Dawson Street / A635 Manchester ring road
	W	Railway arches, canal locks and the River Irwell
	S	Bridgewater Canal and Hulme Lock Basin with commercial buildings beyond

3.0 Site History

A review of the available historical mapping and other information for the site, as presented within the Envirocheck Report (Ref. 1), has been undertaken and is presented in *Table 3.0* below.

Table 3.0 – *Previous Site and Surrounding Area Uses and Potential Sources of Contamination.* ***Bold text refers to on-site activity.***

Date	Description	Potential Sources of Contamination
1848	**The earliest available mapping (1848) shows the site as undeveloped land.** The River Irwell is present to the northwest of the site and the River Medlock along the site's northern boundary. There are residential dwellings, a church and other commercial buildings noted within 250m of the site along with vacant parcels of land.	• Potential for uncontrolled deposition of Made Ground during surrounding construction.
1896 - 1949	**By 1896 the site has been developed and is part of a railway line masonry arches which encompasses the whole of the site.** The surrounding site has undergone vast commercial and residential development. Commercial units recorded within close proximity of the site include; a warehouse, Iron works, Mills (Worsley, Hulme Corn, Cotton and Canal Flour Mills) with associated chimneys. A basin and Hulme Lane Locks are recorded less than 30m from the south of the site.	• Potential for uncontrolled deposition of Made Ground during on-site and surrounding construction. • Potential contamination from railway infrastructure buildings and construction of masonry arches for railway lines.
1950 – 1999	**The site remains as arches under railway lines now noted as a Wharf.** The 1950 map records only part of the warehouse to the north and potential damage to residential and commercial buildings 150-250m south noted as black spaces on the map. By 1985 the mills are no longer recorded and by 1999 a bus depot is located 30m southwest of the site.	• Potential for UXO with buildings in close proximity noting damage.
2006 – Present	**No significant changes have occurred on-site to present day.** The warehouse to the north is now used as flats and offices. The A57(M) road to the east of the site has been expanded.	• Potential for uncontrolled deposition of Made Ground during surrounding construction and demolition works.

Potential sources of onsite contamination are further discussed in *Section 6.0*.

4.0 Geology, Hydrogeology and Hydrology

4.1 Geology and Hydrogeology

A study of the Envirocheck (Ref. 1) Report and the British Geological Survey (BGS) 1:50,000 mapping records (Bedrock and Superficial Editions) for Manchester (Sheet 085) (Ref. 2) indicates the following geological and hydrogeological succession underlying the site:

Table 4.1 – *Geological/Hydrogeological Succession*

Geology	Associated Hydrogeological Classification
BGS Records do not indicate the presence of Made Ground on site, however the site's historical and current use as Railway arches suggests that there is potential for Made Ground deposits. BGS Records indicate Made Ground deposits present less than 10m from the western boundary.	N/A
No superficial deposits recorded	No Data Available
Chester Formation[1]	Principal Aquifer[2]

Notes:

1. *The formation comprises conglomerates and reddish brown, cross-bedded, pebbly sandstones with subordinate beds of red-brown mudstone. The conglomerates have a reddish-brown sandy matrix and consist mainly of pebbles of brown or purple quartzite. Gravel is composed of well-rounded pebbles, cobbles and boulders in a coarse to fine granulestone and silty sandstone matrix.*
2. *These are layers of rock or drift deposits that have high intergranular and/or fracture permeability – meaning they usually provide a high level of water storage. They may support water supply and/or river base flow on a strategic scale. In most cases, principal aquifers are aquifers previously designated as major aquifers.*

There are 4 BGS recorded boreholes located onsite (Ref. 3). However only two of these boreholes are available and details are presented within *Table 4.2* below:

Table 4.2 – *BGS Borehole Records*

Record Reference	Location (NGR)	Details (bottom to top of strata/details/thickness of strata)	
SJ89NW1299	Southeast corner (382780, 397490)	0.00m to 0.15m bgl	Made Ground: Topsoil and ash (0.15m)
		0.15m to 2.10m bgl	Loose brown medium grained SAND and GRAVEL (1.95m)
		2.10m to 3.00m bgl	Loose clayey silty SAND with gravel (0.90m)
		3.00m to 4.10m bgl	Soft grey brown clayey SILT (1.10m)
		4.10m to 5.30m bgl	Soft to firm brown silty slightly peaty CLAY (1.20m)
		5.30m to 6.30m bgl	Medium dense silty fine-grained SAND (1.00m)
		6.30m to 6.40m bgl	Medium dense brown fine to coarse SAND and GRAVEL (0.10m)
		6.40m to 8.40m bgl	Reddish brown medium grained highly weathered SANDSTONE (2.00m)
		8.40m to 17.66m bgl	Reddish brown medium grained moderately weathered SANDSTONE with pieces of mudstone (0.61m)
		2.40m bgl	*Water level encountered*
		17.66m bgl	*Borehole terminated*

Record Reference	Location (NGR)	Details (bottom to top of strata/details/thickness of strata)	
SJ89NW1297	Northeast corner (382770, 397520)	0.00m to 0.30m bgl	Made Ground (bricks and ash) (0.30m)
		0.30m to 0.40m bgl	Made Ground (bricks and clay) (0.10m)
		0.40m to 3.20m bgl	Made Ground (clay, brick and ash fill) (2.80m)
		3.20m to 3.80m bgl	Made Ground (sandy clay with brick fragments (0.60m)
		3.80m to 4.00m bgl	Made Ground (very sandy clay) (0.20m)
		4.00m to 5.70m bgl	Made Ground (bricks and ash) (1.70m)
		5.70m to 6.20m bgl	Made Ground (oily ash and sandstone) (0.50m)
		6.20m to 7.50m bgl	Made Ground (iron foundry furnace slag) (1.30m)
		7.50m to 8.10m bgl	Made Ground (sand and brick fragments) (0.60m)
		8.10m to 8.20m bgl	Medium dense reddish brown medium grained SAND (0.10m)
		8.20m to 10.00m bgl	Brown fine to medium grained highly weathered SANDSTONE (1.80m)
		5.70m	*Water level encountered*
		10.00m	*Borehole terminated*

There are no BGS recorded faults on or within 500m of the site.

The site is not situated within a Source Protection Zone (SPZ). There are no groundwater abstraction points within 650m from the site.

4.1.1 Mining

A review of the Coal Authority interactive mapping (Ref. 4) for the area indicates that the site is located within a coal mining reporting area however is not within a high-risk area and the nearest coal mining features (shafts, outcrops, etc) are located over 2km northwest. Therefore, the risk to development from historic coal mining is considered to be **Low** and has not been considered further.

There are no recorded BGS mineral sites within 900m of the site.

4.1.2 Other Ground Stability Issues

The Envirocheck Report (Ref. 1) confirms that there is a no hazard to very low risk from the following ground stability hazards on the site; collapsible ground, compressible ground, ground dissolution, landslide ground, running sands and shrinking or swelling clay.

4.1.3 Ground Gas

There are no recorded landfill or historic landfill sites within 350m of the site. The Envirocheck Report (Ref. 1) reports Local Authority Landfill Coverage onsite, landfill data has been passed onto the relevant environmental agency.

The Envirocheck report (Ref. 1) identifies one potentially infilled land (non-water) located 126m east of the site dated 1994.

The Envirocheck report (Ref. 1) and UK Maps of Radon (Ref. 5) confirm the site is situated in a lower probability radon area where <1% of homes are above the radon action level. On this basis radon protection measures are not considered necessary in the construction of new dwellings or extensions.

Where the new development incorporates a basement the advice of a specialist Radon assessor must be obtained.

4.2 Hydrology

The nearest surface water feature is the River Irwell, located along the northern and western boundaries of the site. The river quality for this river is Grade E. The Bridgewater Canal is along the southern boundary of the site.

There are 10 pollution incidents to controlled waters recorded within 250m of the site. The closest recorded 54m southwest which recorded chemicals (detergents/surfactant) entering the Manchester Ship Canal dated February 1996. Incident severity was category 3, a minor incident.

There is one surface water abstraction within 500m of the site located 136m west of the site. This abstraction point is operated by Computer Design Systems Ltd for industrial/commercial/public services: General Cooling.

There are 24 active discharge consents recorded within 250m of the site. The nearest within the last 25 years is recorded 11m northeast for public sewage: storm sewage overflow. This is dated March 2018 with the receiving water being the River Medlock.

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5.0 Unexploded Ordnance Risk Assessment

Military activities including those conducted as part of both the First and Second World Wars have resulted in a legacy of unexploded ordnance (UXO) being present within the shallow soils of the UK.

UXO result from various sources including both allied (military training) and German (bombing raids) with a guide figure of approximately 10% of all munitions failing to function as designed.

The likelihood of UXO being encountered on a development site is influenced by several factors including; the proximity to strategic targets, the nature of the development works being undertaken and evidence of local damage in the post-war periods amongst others. To determine the likelihood of UXO being present on a site, a step-wise risk assessment process is followed. This process is outlined within CIRIA C681 Unexploded Ordnance: A Guide for the Construction Industry (Ref. 6) with the following commentary considered to represent a Preliminary Risk Assessment intended to guide if and where there is a requirement for a Detailed Risk Assessment.

5.1 Preliminary UXO Assessment

Risk mapping (Ref. 7) for UXO's has placed the site in a **Moderate** risk area. Moderate-risk regions are those that show a bomb density of between 11 and 50 bombs per 1000 acres and that may contain potential WWII targets. Action to mitigate the risk is considered essential, albeit more likely that a reduced scope of work is required compared with that needed for high-risk regions.

A review of the available historic mapping identified the warehouse 10m north of the site on the 1938 map but blank spaces on the 1950 map. This could be evidence of bomb damage and the nearest is located being the warehouse. The risk mapping indicates that there are UXO finds approximately 550m north of the site.

Analysis of historical bomb mapping from the University of Manchester (*Figure 5.1*) shows evidence of bomb damage within the east section onsite and 15m north from the site. A high explosive bomb (blue circle) had hit the site dated December 1940 (Ref. 8). Within close proximity, the warehouse located 15m north of the site has evidence a high explosive bomb (blue circle) had hit the site dated December 1940. There is evidence of bombing ruins (red shading) where the warehouse is located and damage the warehouse (dashed red shading) dated December 1940.

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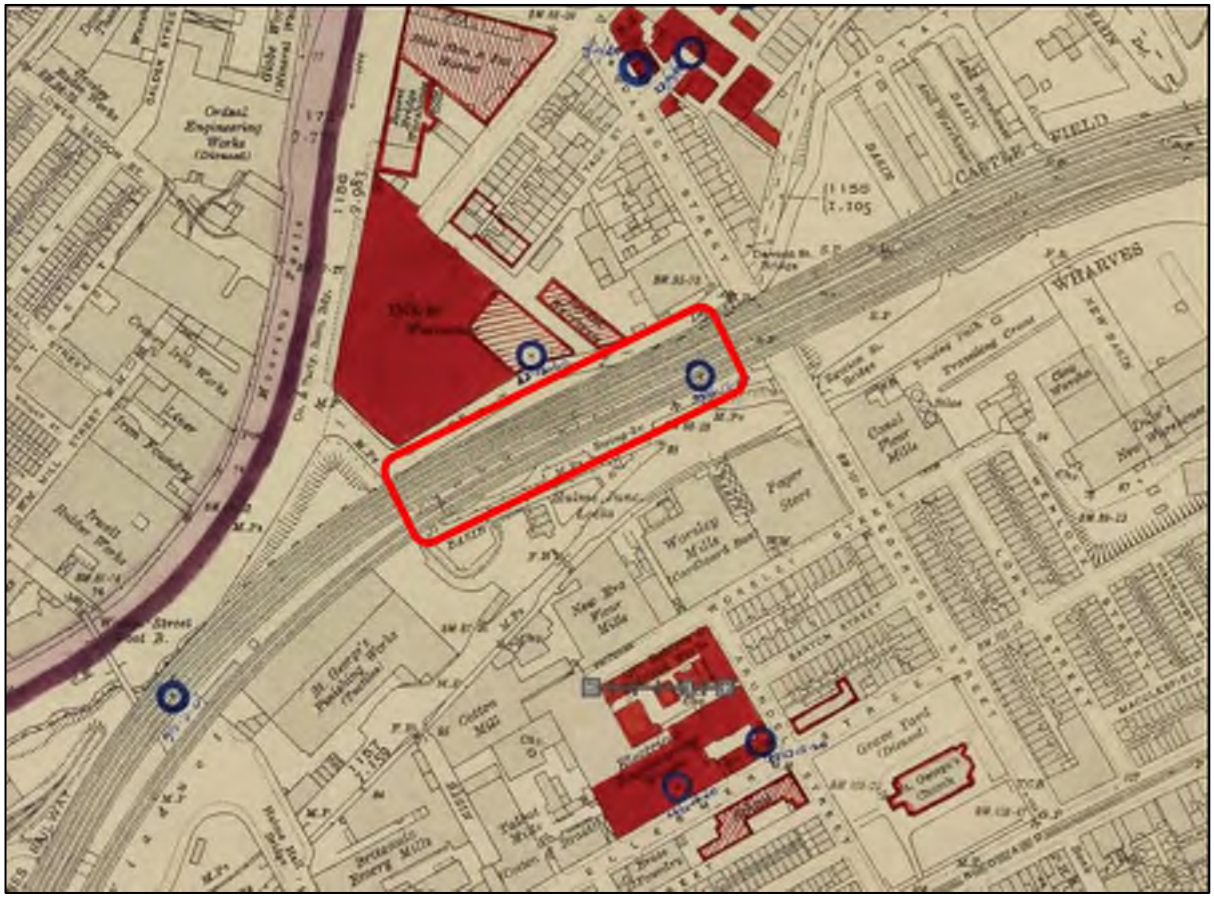


Figure 5.1: *Site boundary shown in red.*

Considering the above, and lack of development since the railway masonry arches, the risk of encountering potential UXO as part of future intrusive works is considered **Moderate to High**. As such the procurement of a Detailed UXO Risk Assessment Report should be obtained.

If unexploded ordnance is discovered during any works, stop immediately, prevent access to the area, and inform the police. If the site boundary or location changes then the UXO risk should be reassessed.

6.0 Conceptual Site Model & Qualitative Risk Assessment

The conceptual site model (CSM) and Qualitative Risk Assessment (QRA) are presented in the table within this section.

The CSM details the source-pathway-receptor linkages or potential pollutant linkages (PPL) that have been identified for the site. The QRA details the associated level of risk relating to these potential pollutant linkages.

The CSM and QRA concern risk to human health and water environment with additional, more specific risk assessment protocols contained within the main body of this reporting, as detailed in *Section 6.1* below.

The QRA follows the framework outlined within CIRIA C552 (Ref. 9) which is summarised within *Appendix C.*

The 'risk rating' within the QRA refers to the risk that the source, pathway, receptor linkage or PPL is complete. Unless specifically stated it does not necessarily refer to an immediate risk and is intended to be used as a tool to assess the necessity for further assessment/investigation.

6.1 Additional Risk Assessments

The following risk assessments, listed below, are not included within the main CSM and QRA but nonetheless can be of critical importance to the onward development of the site:

- The risk presented by Mining is discussed and assessed in *Section 4.1.1*.
- The risk presented by Radon is discussed and assessed in *Section 4.1.3*.
- The risk presented by Unexploded Ordnance is discussed and assessed in *Section 5.0*.

Under current health and safety legislation, employers are required to carry out their own appropriate risk assessments and mitigation to protect themselves and their employees, other human receptors and the environment from potential contamination. Such risks must be adequately mitigated by law, specifically the Construction Design Management (CDM) Regulations, 2015 (Ref. 10) which require that potential risks to human health and the environment from construction activities are appropriately identified and all necessary steps taken to eliminate / manage that risk. It has been assumed that any future construction works on site will be undertaken in compliance with these requirements.



- The table below represents the first stage in the land quality risk assessment process: The Qualitative Risk Assessment.
- For a development site to be deemed 'suitable for use', the level of risk needs to be brought down to acceptable levels, i.e. low to very low risk. The purpose of each stage of risk assessment is ultimately to establish, if there is a requirement for additional levels of assessment to be made to have sufficient confidence to support a risk characterisation or management decision, e.g. remedial action.
- In the absence of specific site data, a Generic Quantitative Risk Assessment is invariably recommended.

Conceptual Site Model			Qualitative Risk Assessment			Recommended Actions
Source	**Pathway(s)**	**Receptor(s)**	**Consequence**	**Likelihood of Occurrence**	**Risk Rating**	
Significant sources of on-site contamination: • Made Ground of unknown composition from uncontrolled deposition of materials onsite during the construction. Significant sources of off-site contamination: • Uncontrolled deposition of Made Ground during the construction of roads and structures and demolition near and adjacent to the site's boundaries. • Made Ground recorded from BGS maps adjacent to the western boundary.	Direct contact, ingestion, inhalation (dust and vapours)	**End-user of site** (Residential) **& Construction Workers**	**Medium** Chronic health risk	**Likely** Based on the site's development history and boreholes onsite recording presences of Made Ground, the likelihood of encountering significant contamination within the Made Ground is considered to be Likely in areas of soft landscaping. Areas of building footprint and hard standing will break the source-pathway-receptor across the majority of the site Likelihood of construction workers coming into contact with contamination on site can reduced by appropriate PPE.	**Moderate**	**Generic Quantitative Risk Assessment** Recommended as part of the ground investigation.
	Vertical migration through the superficial deposits (soils) May occur due to existing service corridors and physical processes including; capillary action and downwards into the natural deposits through infiltration.	**Controlled Waters** (Groundwater) Principal Aquifer (Bedrock), no data is recorded for the superficial deposits or superficial aquifer. No potable groundwater abstraction points within 1km of the site. Not located within a Source Protection Zone.	**Medium** Pollution of sensitive water resources	**Low Likelihood** While there is the potential for localised contamination to migrate vertically through the superficial deposits to the bedrock principal aquifer, there is no recorded data for a superficial aquifer and no data for superficial deposits.	**Moderate / Low**	**Generic Quantitative Risk Assessment** Recommended as part of the ground investigation.
	Horizontal migration over and through the superficial deposits (soils)	**Controlled Waters** (Surface Water) Nearest surface water feature is the River Irwell located along the north and west boundary, the Bridgewater Canal south boundary of the site. River quality for the River Irwell is Grade E. There is one surface water abstraction point located 136m west.	**Mild** Pollution of non-sensitive water resources	**Low Likelihood** Considering the close proximity from the site to the nearest surface water receptor but taking into account the poor water quality and surrounding industrial land use and the lack of historical industries on the site. .	**Low**	**Generic Quantitative Risk Assessment** Recommended as part of the ground investigation.
Significant sources of ground gas: • Localised organically rich deposits present within the natural soils. • Infilled land (non-water) recorded 126m east of the site.	Vertical and horizontal migration through existing service corridors and the underlying superficial deposits	**End-user of site** (Residential)	**Medium** Human health risk	**Likely** There is potential for gas generation from the close proximity of recorded Made Ground from BGS maps which could potentially comprise of organically rich deposits.	**Moderate**	**Generic Quantitative Risk Assessment** Recommended as part of the ground investigation.

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7.0 Conclusion and Recommendations

The qualitative risk assessment (QRA) determined a varied level of level of risk associated with the proposed development.

The QRA concluded by recommending that generic quantitative risk assessments (GQRA) were conducted to confirm the assessment of risk ascribed to each of the respective potential pollutant linkages (PPLs). It is recommended that the GQRA is conducted as part of a ground investigation in support of the engineering design of the proposed development.

In summary, the following recommendations are made:

- Obtain a Detailed UXO Risk Assessment Report prior to any intrusive works being undertaken at the site;
- Undertake an intrusive ground investigation;
- Undertake a GQRA as part of the ground investigation; and
- Undertake ground gas monitoring over a period of two-three months for potential hazardous gases.

It is further recommended that the site investigation works are completed in advance of any development works taking place.

7.1 Contaminants of Concern

Potential contaminants of concern associated with the sources identified within the Conceptual Site Model in *Section 6.0* of this reporting include but are not limited to: broad range aliphatic and aromatic hydrocarbons present within any fuel oils; polycyclic aromatic hydrocarbons (PAHs); inorganic compounds including heavy metals; and asbestos present in discarded building materials.

Potential contaminants associated with the airborne dust/particulates include but are not limited to: polycyclic aromatic hydrocarbons and inorganic compounds including toxic metals that are also accounted for by potential onsite contaminants of concern.

7.2 Other Considerations

The requirement for additional surveys, e.g. arboricultural and ecological surveys, should be confirmed through advice from a suitably qualified and experienced professional.

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8.0 References

1. Landmark (2020) Envirocheck Report (report no. 272481752 _1_1).
2. British Geological Survey (BGS) Solid and Drift Editions (1970) 1:50,000 mapping, Sheet No. 085 (Manchester).
3. BGS Geology of Britain Viewer [online], http://mapapps.bgs.ac.uk/geologyofbritain/home.html (accessed February 2021).
4. Coal Authority Interactive Map Viewer [online], http://mapapps2.bgs.ac.uk/coalauthority/home.html (accessed February 2021).
5. UK Maps of Radon [online], http://www.ukradon.org/information/ukmaps (accessed February 2021).
6. CIRIA (2009) Unexploded Ordnance: A Guide for the Construction Industry (report no. C681).
7. Zetica Regional Unexploded Bomb Risk map [online], https://zeticauxo.com/downloads-and-resources/risk-maps/ (accessed February 2021).
8. The University of Manchester, Manchester Bomb Damage Maps [online], https://luna.manchester.ac.uk/luna/servlet/detail/maps002~1~1~342635~123259?sort=reference_number%2Ctitle&qvq=q:bomb%20damage;sort:reference_number%2Ctitle;lc:maps002~1~1&mi=16&trs=49 (accessed February 2021).
9. CIRIA (2001) Contaminated Land Risk Assessment. A guide to good practice (report no. C552).
10. Health and Safety Executive (2015) Construction (Design and Management) Regulations.

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Appendix A Drawings

- Jon Matthews Architects, Embassy Village – Castlefield Arches, Proposed Block Plan Ground Floor Plan, Project 149, drawing ref. _MP_00_1200, Rev A
- Curtins, Conceptual Site Model, drawing ref. 077442-CUR-00-XX-DR-GE-001-V01_Diagrammatic_CSM, 05/02/2021

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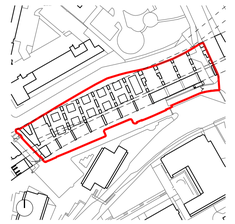
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All Contractors must visit the site and are responsible for taking and checking all dimensions relative to their work. Jon Matthews Architects are to be advised of any variation between drawings and site conditions.

Electronic data/ drawings issued as 'read only' and should not be interrogated for measurement. All dimensions and levels should be read only from those values stated in text, on the drawings

CONSTRUCTION – It is considered that the proposed works are within the scope of a competent Contractor and as such no unusual hazards have been identified, refer to relevant Key/ Schedule/ Designers Risk Assessment

Key Plan:



1:250

0 2m 5m 10m 15m

KEY

Application Boundary — Area: 0.611 Ha

01 Site Security / Entrance
02 Refuse Storage
03 Games / Sports Area
04 Village Hall
05 Turning Area
06 Parking Area
07 Bedroom Pods
08 Central Circualtion Route
09 Rear Circulation Route
10 Games Area
11 Multi-Use Space
12 Relaxation / Social Space
13 Canalside Seating
14 Allotments
15 BBQ / Dining Area
16 Greenhouse
17 Vacant Arch
18 Life Ring

Notes

THIS IS CONCEPT LEVEL INFORMATION TO BE USED AS INDICATIVE DESIGN / SPEC FOR COSTING PURPOSES ONLY. DETAILED DESIGN AND ACTUAL SPECIFICATION TO BE UNDERTAKEN AT THE NEXT STAGE OR DELIVER VIA PROPRIETARY SYSTEM.

To be read in conjunction with Landscape Architect's information

Revs:	Dates:	Details:
-	11/01/21	Issued for INFORMATION Revised Scheme
-	18/12/20	Issued for INFORMATION
-	16/12/20	Issued as DRAFT for INFORMATION

Jon Matthews Architects
22 City Tower, Piccadilly Plaza, New York St, Manchester, M1 4BT

Project:
Embassy Village - Castlefield Arches

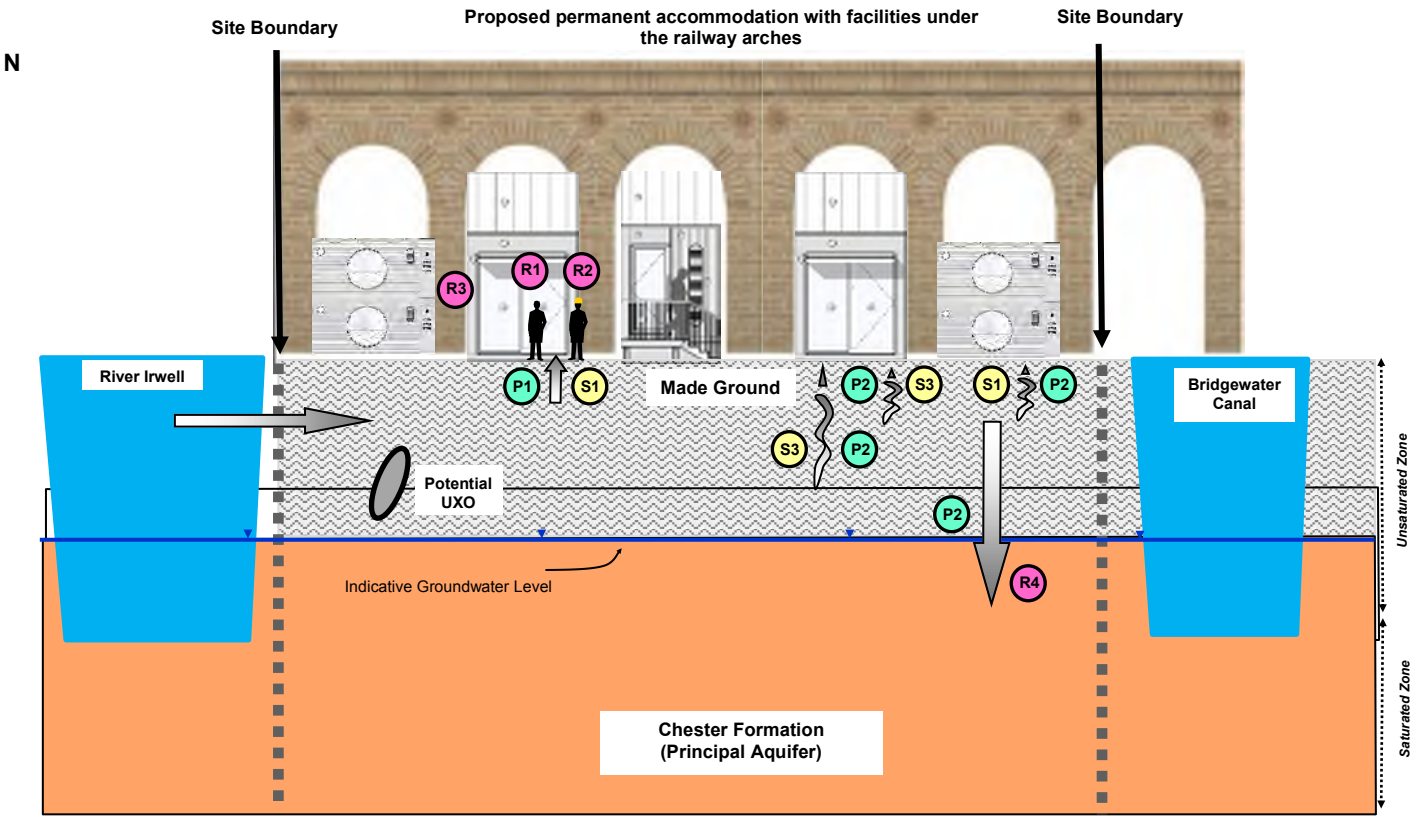
Titles:
Proposed Block Plan
Ground Floor Plan

Scale:	Origin Date:	Drawn:	Checked:
1:250@A1	16/12/20	EM	JC

Status:
Stage 2

Project:	Drawing No:	Revs:
149	_MP_00_1200	A

Embassy Village



Sources

- S1 Made Ground (onsite)
- S2 Made Ground (offsite)
- S3 Ground Gas Sources

Pathways

- P1 Direct contact, ingestion and or inhalation
- P2 Vertical migration
- P3 Horizontal migration

Receptors

- R1 End-users
- R2 Construction workers
- R3 Construction materials
- R4 Groundwater

Not to scale

curtins
Merchant Exchange
17-19 Whitworth Street West
Manchester, M1 5WG
Tel: 0161 236 2394

Project	Job Reference	Author	Client
Embassy Village – Castlefield Arches	077442	RT	Embassy
Drawing Title	**Date**	**Checked**	**Drawing Number**
Diagrammatic Conceptual Site Model	05/02/2021	NF	077442-CUR-00-XX-DR-GE-001-V01

Appendix B Envirocheck Report

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Envirocheck® Report:

Datasheet

Order Details:

Order Number:
272481752_1_1

Customer Reference:
077442

National Grid Reference:
382710, 397470

Slice:
A

Site Area (Ha):
0.64

Search Buffer (m):
1000

Site Details:

Embassy Village Scheme
Dawson St
Castlefield
MANCHESTER
M15 4NU

Client Details:

Miss S Hyde
Curtins Consulting Ltd
Merchant Exchange
17-19 Whitworth Street West
Manchester
M1 5WG

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Data Suppliers	121
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Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.
In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Report Version v53.0

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 2		24	9	29
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices	pg 18				1
Integrated Pollution Controls					
Integrated Pollution Prevention And Control	pg 18				1
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 18		1	2	15
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 21	Yes			
Pollution Incidents to Controlled Waters	pg 21		10	5	19
Prosecutions Relating to Authorised Processes	pg 26				2
Registered Radioactive Substances	pg 27				2
River Quality	pg 27	1	2	1	2
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points	pg 28				1
Substantiated Pollution Incident Register	pg 29				2
Water Abstractions	pg 29		1		7 (*49)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 43	Yes	n/a	n/a	n/a
Groundwater Vulnerability - Soluble Rock Risk			n/a	n/a	n/a
Groundwater Vulnerability - Local Information			n/a	n/a	n/a
Bedrock Aquifer Designations	pg 43	Yes	n/a	n/a	n/a
Superficial Aquifer Designations			n/a	n/a	n/a
Source Protection Zones	pg 43				1
Extreme Flooding from Rivers or Sea without Defences	pg 43	Yes	Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 43	Yes	Yes	n/a	n/a
Areas Benefiting from Flood Defences				n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 44	1	19	20	31

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites	pg 53			1	3
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 53		1	2	5
Local Authority Landfill Coverage		1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 55		2	1	3
Potentially Infilled Land (Water)	pg 56		4	6	32
Registered Landfill Sites	pg 58				3
Registered Waste Transfer Sites	pg 59			1	1
Registered Waste Treatment or Disposal Sites	pg 60			1	1
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 62	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 62	Yes	Yes		Yes
BGS Recorded Mineral Sites	pg 63				1
BGS Urban Soil Chemistry	pg 63			Yes	Yes
BGS Urban Soil Chemistry Averages	pg 66	Yes			
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 66	Yes	n/a	n/a	n/a
Mining Instability			n/a	n/a	n/a
Man-Made Mining Cavities	pg 66			1	
Natural Cavities					
Non Coal Mining Areas of Great Britain				n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 66	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 66		Yes	n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 67	Yes		n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 67	Yes	Yes	n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 67		Yes	n/a	n/a
Radon Potential - Radon Affected Areas			n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 68		42	48	226
Fuel Station Entries	pg 95		1	3	3
Points of Interest - Commercial Services	pg 95		6	23	50
Points of Interest - Education and Health	pg 102				1
Points of Interest - Manufacturing and Production	pg 102		11	6	62
Points of Interest - Public Infrastructure	pg 109		4	14	17
Points of Interest - Recreational and Environmental	pg 111			2	13
Gas Pipelines					
Underground Electrical Cables					

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland					
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones	pg 114				1
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (S)	0	1	382712 397450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	0	1	382712 397473
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (W)	0	1	382650 397450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (E)	8	1	382800 397473
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (E)	10	1	382800 397500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	27	1	382600 397473
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	34	1	382750 397400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	77	1	382550 397450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	77	1	382550 397473
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	91	1	382550 397400
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	101	1	382800 397350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (E)	121	1	382900 397550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (W)	136	1	382500 397400
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	161	1	382500 397350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	162	1	382550 397600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (N)	165	1	382650 397650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (E)	168	1	382950 397550
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	195	1	382500 397300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	203	1	382450 397350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	231	1	382500 397250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	232	1	382450 397300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (E)	258	1	383050 397500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (E)	258	1	383050 397473
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NW (E)	264	1	383050 397550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	272	1	382400 397300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NE)	283	1	383000 397700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (N)	288	1	382700 397800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	301	1	382450 397200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	302	1	382450 397700
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (N)	327	1	382712 397850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SW (N)	337	1	382700 397850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (E)	358	1	383150 397473
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SW (SW)	372	1	382400 397150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (N)	377	1	382712 397900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (N)	378	1	382800 397900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12SE (SW)	383	1	382300 397250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (N)	433	1	382850 397950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A18SE (N)	492	1	382900 398000
1	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Egerton St/Worsley St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0181 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 1st January 1995 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	7	2	382780 397530

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Egerton St Worsley St Cso Egerton St And Worsley St, Cornbrook, A57 M, Manchester, M15 4lg Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016983277 Permit Version: 2 Effective Date: 1st April 2018 Issued Date: 12th March 2018 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: The River Medlock **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	11	2	382787 397531
1	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Chester Rd At York St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982720 Permit Version: 1 Effective Date: 30th September 1994 Issued Date: Not Supplied Revocation Date: 18th February 1999 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	13	2	382790 397530
1	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Chester Rd/York St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0279 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 19th December 1999 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	13	2	382790 397530
1	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Egerton St/Elesmere St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0180 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 12th August 1999 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	13	2	382790 397530

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
1	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: Chester Rd At York St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982720 Permit Version: 2 Effective Date: 19th February 1999 Issued Date: Not Supplied Revocation Date: 14th July 2000 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	13	2	382790 397530
1	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Egerton St Worsley St Cso Egerton St And Worsley St, Cornbrook, A57 M, Manchester, M15 4lg Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016983277 Permit Version: 1 Effective Date: 1st November 1999 Issued Date: 19th February 1999 Revocation Date: 31st March 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: The River Medlock **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	14	2	382791 397530
2	**Discharge Consents** Operator: Dandara Limited Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: St Georges Island Projects Office, Hulme Hall Road, Manchester, M15 4ly Authority: Environment Agency, North West Region Catchment Area: Irwell Reference: 016993598 Permit Version: 1 Effective Date: 14th September 2004 Issued Date: 14th September 2004 Revocation Date: 14th January 2005 Discharge Type: Trade Effluent Discharge-Site Drainage Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Consent expired** Positional Accuracy: Located by supplier to within 10m	A13SW (W)	17	2	382610 397450
3	**Discharge Consents** Operator: Hanson Quarry Products Europe Limited Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Potato Wharf, Off Liverpool Rd, Manchester, Greater Manchester, M3 4la Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 0175/5 Permit Version: 1 Effective Date: 20th January 1975 Issued Date: Not Supplied Revocation Date: 31st March 1991 Discharge Type: Trade Discharge - Process Water Discharge Environment: Freshwater Stream/River Receiving Water: Crowton Brook **Status: Authorisation revoked** Positional Accuracy: Manually corrected supplier location	A13NE (NE)	80	2	382800 397600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
3	**Discharge Consents** Operator: Hanson Quarry Products Europe Limited Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Potato Wharf, Off Liverpool Rd, Manchester, Greater Manchester, M3 4la Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 0175/5 Permit Version: 4 Effective Date: 1st July 1995 Issued Date: Not Supplied Revocation Date: 8th March 2016 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Crowton Brook **Status: Surrendered under EPR 2010** Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	80	2	382800 397600
3	**Discharge Consents** Operator: Hanson Quarry Products Europe Limited Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Potato Wharf, Off Liverpool Rd, Manchester, Greater Manchester, M3 4la Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 0175/5 Permit Version: 3 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 30th June 1995 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Crowton Brook **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	80	2	382800 397600
3	**Discharge Consents** Operator: Hanson Quarry Products Europe Limited Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Potato Wharf, Off Liverpool Rd, Manchester, Greater Manchester, M3 4la Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 0175/5 Permit Version: 2 Effective Date: 1st April 1991 Issued Date: Not Supplied Revocation Date: 31st December 1994 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Crowton Brook **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	80	2	382800 397600
4	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Junction Rolls Cres/Yew Street Cso, Hulme, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982958 Permit Version: 3 Effective Date: 1st January 2015 Issued Date: 29th March 2010 Revocation Date: 25th February 2015 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Canal Receiving Water: Manchester Ship Canal **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	139	2	382520 397360

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Junction Rolls Cres/Yew Street Cso, Hulme, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982958 Permit Version: 2 Effective Date: 31st March 2005 Issued Date: 14th March 2005 Revocation Date: 31st December 2014 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Canal Receiving Water: Manchester Ship Canal **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	139	2	382520 397360
4	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: City Rd Cso 288ov 204 City Road, ., ., Manchester, M15 5jq Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982954 Permit Version: 2 Effective Date: 31st March 2005 Issued Date: 7th March 2005 Revocation Date: 31st December 2014 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Canal Receiving Water: Manchester Ship Canal **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	139	2	382520 397360
4	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Stretford Rd/Upper Moss Lane Cso, Hulme, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0365 Permit Version: 2 Effective Date: 31st March 2005 Issued Date: 7th March 2005 Revocation Date: 31st December 2014 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Canal Receiving Water: Manchester Ship Canal **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	139	2	382520 397360
4	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: City Rd Cso 288ov 204 City Road, ., ., Manchester, M15 5jq Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982954 Permit Version: 1 Effective Date: 23rd June 1995 Issued Date: Not Supplied Revocation Date: 30th March 2005 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Canal Receiving Water: Manchester Ship Canal **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	139	2	382520 397360

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Marple St/Rolls Cres Cso, Hulme, Greater Manchester, M15 5ft Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982958 Permit Version: 1 Effective Date: 8th August 1995 Issued Date: Not Supplied Revocation Date: 30th March 2005 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Canal Receiving Water: Manchester Ship Canal **Status:** **Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	139	2	382520 397360
4	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: City Rd Cso 288ov 204 City Road, ., ., Manchester, M15 5jq Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982954 Permit Version: 4 Effective Date: 2nd July 2018 Issued Date: 2nd July 2018 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Canal Receiving Water: Via Sws Manchester Ship Canal **Status:** **Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	147	2	382511 397359
4	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Junction Rolls Cres/Yew Street Cso, Hulme, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982958 Permit Version: 4 Effective Date: 26th February 2015 Issued Date: 26th February 2015 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Canal Receiving Water: Manchester Ship Canal **Status:** **Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	150	2	382510 397355
4	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: City Rd Cso 288ov 204 City Road, ., ., Manchester, M15 5jq Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982954 Permit Version: 3 Effective Date: 1st January 2015 Issued Date: 29th March 2010 Revocation Date: 1st July 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Canal Receiving Water: Manchester Ship Canal **Status:** **Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	150	2	382510 397355

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Stretford Rd/Upper Moss Lane Cso, Hulme, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0365 Permit Version: 3 Effective Date: 1st January 2015 Issued Date: 29th March 2010 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Canal Receiving Water: Manchester Ship Canal **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	150	2	382510 397355
5	**Discharge Consents** Operator: North Western Road Car Co Ltd Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Garage At Hulme Hall Rd Hulme Hall Road, Stockport, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 0168/800 Permit Version: 1 Effective Date: 1st April 1991 Issued Date: Not Supplied Revocation Date: 31st December 1994 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Irwell **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	223	2	382492 397268
5	**Discharge Consents** Operator: Peel Investments (North) Limited Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Garage At Hulme Hall Rd Hulme Hall Road, Stockport, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 0168/800 Permit Version: 2 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 16th April 2002 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Irwell **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	223	2	382492 397268
6	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Mancunian Way Roundabout, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0368 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Unknown Receiving Water: Not Supplied **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A13SE (SE)	264	2	382960 397280

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
7	**Discharge Consents** Operator: Charles Topham (Developments) Ltd Property Type: DOMESTIC PROPERTY (MULTIPLE) (INCL FARM HOUSES) Location: Topham Res Development Swo, Liverpool Road/Potato Wharf, Castlefield, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016991276 Permit Version: 1 Effective Date: 18th May 1988 Issued Date: Not Supplied Revocation Date: 1st July 1991 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Canal Receiving Water: Bridgewater Canal **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	283	2	383000 397700
7	**Discharge Consents** Operator: Rmc Roadstone Ltd - North West Property Type: MAKING OF GLASS/CERAMICS/CEMENT/CUTTING STONE Location: Ready Mixed Concrete Depot, Liverpool Road, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016990275 Permit Version: 1 Effective Date: 10th March 1977 Issued Date: Not Supplied Revocation Date: 31st August 1989 Discharge Type: Trade Discharge - Process Water Discharge Environment: Canal Receiving Water: Bridgewater Canal **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A13NE (NE)	303	2	383000 397730
8	**Discharge Consents** Operator: J Sainsbury Plc Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: J Sainsbury Plc Swo Regent Road, End Of Ordsall Alne, Salford, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016991422 Permit Version: 1 Effective Date: 1st November 1994 Issued Date: Not Supplied Revocation Date: 1st November 1994 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Irwell **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A13NW (N)	305	2	382630 397790
9	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Water Street/Liverpool Road Cso Water Street, 133 Liverpool Road, Manchester, Greater Manchester, M3 4pu Authority: Environment Agency, North West Region Catchment Area: Irwell Reference: 016993597 Permit Version: 1 Effective Date: 5th October 2004 Issued Date: 5th October 2004 Revocation Date: 30th August 2014 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irwell **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A18SE (N)	370	2	382820 397890

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Water Street/Liverpool Road Cso Water Street, 133 Liverpool Road, Manchester, Greater Manchester, M3 4pu Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0169 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 25th October 1995 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irwell **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A18SE (N)	370	2	382820 397890
9	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Water Street/Liverpool Road Cso Water Street, 133 Liverpool Road, Manchester, Greater Manchester, M3 4pu Authority: Environment Agency, North West Region Catchment Area: Irwell Reference: 016993597 Permit Version: 3 Effective Date: 9th January 2020 Issued Date: 9th January 2020 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irwell **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A18SE (N)	374	2	382822 397894
9	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Water Street/Liverpool Road Cso Water Street, 133 Liverpool Road, Manchester, Greater Manchester, M3 4pu Authority: Environment Agency, North West Region Catchment Area: Irwell Reference: 016993597 Permit Version: 2 Effective Date: 31st August 2014 Issued Date: 24th March 2014 Revocation Date: 8th January 2020 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irwell **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A18SE (N)	386	2	382836 397905
10	**Discharge Consents** Operator: United Utilities Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Rice St Near Castle St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0171 Permit Version: 1 Effective Date: 15th September 1993 Issued Date: Not Supplied Revocation Date: 15th September 1993 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Canal Receiving Water: Bridgewater Canal **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A14NW (NE)	380	2	383120 397690

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
11	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Hampton St/Ordsall Lane, Salford, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01SAL0183 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Unknown Receiving Water: Not Supplied **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A18SW (N)	507	2	382680 398020
12	**Discharge Consents** Operator: Hanson Quarry Products Europe Limited Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Potato Wharf, Off Liverpool Rd, Manchester, Greater Manchester, M3 4la Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 0175/5 Permit Version: 1 Effective Date: 20th January 1975 Issued Date: Not Supplied Revocation Date: 31st March 1991 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Crowton Brook **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A14NW (E)	508	2	383300 397500
12	**Discharge Consents** Operator: Hanson Quarry Products Europe Limited Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Potato Wharf, Off Liverpool Rd, Manchester, Greater Manchester, M3 4la Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 0175/5 Permit Version: 2 Effective Date: 1st April 1991 Issued Date: Not Supplied Revocation Date: 31st December 1994 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Crowton Brook **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A14NW (E)	508	2	383300 397500
12	**Discharge Consents** Operator: Hanson Quarry Products Europe Limited Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Potato Wharf, Off Liverpool Rd, Manchester, Greater Manchester, M3 4la Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 0175/5 Permit Version: 3 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 30th June 1995 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Crowton Brook **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A14NW (E)	508	2	383300 397500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	**Discharge Consents** Operator: Hanson Quarry Products Europe Limited Property Type: WWTW (NOT WATER CO) (NOT STP AT A PRIVATE PREMISES) Location: Potato Wharf, Off Liverpool Rd, Manchester, Greater Manchester, M3 4la Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 0175/5 Permit Version: 4 Effective Date: 1st July 1995 Issued Date: Not Supplied Revocation Date: 8th March 2016 Discharge Type: Sewage Discharges - Final/Treated Effluent - Not Water Company Discharge Environment: Freshwater Stream/River Receiving Water: Crowton Brook **Status: Surrendered under EPR 2010** Positional Accuracy: Located by supplier to within 100m	A14NW (E)	508	2	383300 397500
13	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Grape Street Cso Grape Street, ., Manchester, Greater Manchester, M60 9ea Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0170 Permit Version: 3 Effective Date: 11th January 2017 Issued Date: 11th January 2017 Revocation Date: 31st March 2018 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irwell **Status: Varied under EPR 2010** Positional Accuracy: Approximate location provided by supplier	A18SE (NE)	526	2	383000 398000
13	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Grape Street Cso Grape Street, ., Manchester, Greater Manchester, M60 9ea Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0170 Permit Version: 2 Effective Date: 3rd September 2010 Issued Date: 3rd September 2010 Revocation Date: 10th January 2017 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irwell **Status: Varied under EPR 2010** Positional Accuracy: Approximate location provided by supplier	A18SE (NE)	526	2	383000 398000
13	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Grape Street Cso Grape Street, ., Manchester, Greater Manchester, M60 9ea Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0170 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 2nd September 2010 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irwell **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A18SE (NE)	526	2	383000 398000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
14	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Water Street Cso, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982993 Permit Version: 1 Effective Date: 23rd June 1995 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irwell **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A18SE (NE)	535	2	382950 398030
15	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Chester Rd At Owen St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0276 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 1st December 1999 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A14SW (E)	570	2	383360 397430
15	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Chester Rd At Owen St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 016982719 Permit Version: 1 Effective Date: 30th September 1994 Issued Date: Not Supplied Revocation Date: 30th November 1999 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Manually corrected supplier location	A14SW (E)	570	2	383360 397430
15	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Chester Rd At Owen St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982719 Permit Version: 2 Effective Date: 1st December 1999 Issued Date: Not Supplied Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A14SW (E)	571	2	383360 397425

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
15	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Deansgate, L. Peter St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0157 Permit Version: 2 Effective Date: 3rd September 2010 Issued Date: 3rd September 2010 Revocation Date: 18th July 2014 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Tunnel To Medlock **Status: Surrendered under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A14SW (E)	579	2	383370 397450
15	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Deansgate, L. Peter St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0157 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 2nd September 2010 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Into And/Or Watercourse Receiving Water: Tunnel To Medlock **Status: Post National Rivers Authority Legislation where issue date > 31/08/1989** Positional Accuracy: Located by supplier to within 100m	A14SW (E)	579	2	383370 397450
16	**Discharge Consents** Operator: Manchester Quays Developments (Mgy) Limited Property Type: CONSTRUCTION OF BUILDINGS Location: St Johns Development Settlement Tnk Quay Street, ., Manchester, Lancashire, M3 2gs Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: Eprmb3590df Permit Version: 1 Effective Date: 15th May 2020 Issued Date: 15th May 2020 Revocation Date: Not Supplied Discharge Type: Trade Discharge - Process Water Discharge Environment: Freshwater Stream/River Receiving Water: Tributary Of The River Irwell **Status: New issued under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A18SE (NE)	583	2	383030 398049
16	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Grape Street Cso Grape Street, ., Manchester, Greater Manchester, M60 9ea Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: 01man0170 Permit Version: 4 Effective Date: 1st April 2018 Issued Date: 19th March 2018 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irwell **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A18SE (NE)	584	2	382986 398069

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
17	**Discharge Consents** Operator: Fq Developments Limited Property Type: CONSTRUCTION OF BUILDINGS Location: Owen Street, ., ., Manchester, M15 4pz Authority: Environment Agency, North West Region Catchment Area: Not Supplied Reference: Eprfb3091rh Permit Version: 1 Effective Date: 4th October 2016 Issued Date: 4th October 2016 Revocation Date: 2nd July 2018 Discharge Type: Trade Effluent Discharge-Site Drainage Discharge Environment: Freshwater Stream/River Receiving Water: The River Medlock **Status: Surrendered under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A14SE (E)	646	2	383421 397334
18	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Water St/New Quay St Cso Water Street New Quay Street, Spinningfields, Manchester, Greater Manchester, M3 4jq Authority: Environment Agency, North West Region Catchment Area: Irwell Reference: 016993831 Permit Version: 1 Effective Date: 21st March 2006 Issued Date: 21st March 2006 Revocation Date: 1st October 2019 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: The River Irwell **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	714	2	383080 398170
18	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Water St/New Quay St Cso Water Street New Quay Street, Spinningfields, Manchester, Greater Manchester, M3 4jq Authority: Environment Agency, North West Region Catchment Area: Irwell Reference: 016993831 Permit Version: 2 Effective Date: 2nd October 2019 Issued Date: 2nd October 2019 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: The River Irwell **Status: Varied under EPR 2010** Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	720	2	383084 398175
19	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Water St/New Quay St Cso Water Street New Quay Street, Spinningfields, Manchester, Greater Manchester, M3 4jq Authority: Environment Agency, North West Region Catchment Area: Irwell Reference: 01MAN0172 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: 1st January 1995 Revocation Date: 20th March 2006 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irwell **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A19NW (NE)	776	2	383120 398220

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	**Discharge Consents** Operator: Fearnley Developments Ltd Property Type: CONSTRUCTION OF BUILDINGS Location: Fearnley Developments Ltd, Salford, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016991429 Permit Version: 1 Effective Date: 1st January 1900 Issued Date: Not Supplied Revocation Date: 1st November 1994 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Irwell **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A19NW (NE)	830	2	383140 398270
21	**Discharge Consents** Operator: Fearnley Developments Ltd Property Type: CONSTRUCTION OF BUILDINGS Location: Fearnley Developments Ltd, Salford, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016991429 Permit Version: 1 Effective Date: 1st January 1900 Issued Date: Not Supplied Revocation Date: 1st November 1994 Discharge Type: Discharge Of Other Matter-Surface Water Discharge Environment: Freshwater Stream/River Receiving Water: River Irwell **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A19NW (NE)	883	2	383180 398310
22	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Albion Street/Hewitt St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0251 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 1st January 1995 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A14SE (E)	908	2	383700 397470
22	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Albion Street/Hewitt St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 016982706 Permit Version: 1 Effective Date: 30th September 1994 Issued Date: Not Supplied Revocation Date: 13th November 2019 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Medlock **Status: Surrendered under EPR 2010** Positional Accuracy: Located by supplier to within 100m	A14SE (E)	908	2	383700 397465

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	**Discharge Consents** Operator: United Utilities Water Limited Property Type: WWTW/SEWAGE TREATMENT WORKS (WATER COMPANY) Location: The Eagle/William Kent Cres Cso, Hulme, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01MAN0365 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: Not Supplied Revocation Date: 30th March 2005 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Canal Receiving Water: Manchester Ship Canal **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A9SW (SE)	911	2	383110 396630
24	**Discharge Consents** Operator: United Utilities Water Limited Property Type: PUMPING STATION ON SEWERAGE NETWORK (WATER COMPANY) Location: Trumpet Street, Sso, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Not Given Reference: 01man0168 Permit Version: 1 Effective Date: 15th September 1993 Issued Date: Not Supplied Revocation Date: 15th September 1993 Discharge Type: Sewage Discharges - Final/Treated Effluent - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Tib Culvert-Medlock **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A14NE (E)	930	2	383720 397550
25	**Discharge Consents** Operator: The Lord Chancellor Property Type: Undefined Or Other Location: Manchester Civil Justice Centre, Gartside Street, Manchester, M3 3el Authority: Environment Agency, North West Region Catchment Area: Irwell Reference: 016993601 Permit Version: 2 Effective Date: 1st January 2007 Issued Date: 26th April 2006 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Cooling Water Discharge Environment: Freshwater Stream/River Receiving Water: River Irwell **Status: Modified (Water Resources Act 1991, Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	983	2	383310 398350
25	**Discharge Consents** Operator: United Utilities Water Plc (?) Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Water St/Bridge St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Irwell Reference: 016993550 Permit Version: 1 Effective Date: 12th April 2006 Issued Date: 12th April 2006 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: The River Irwell **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	997	2	383320 398360

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
25	**Discharge Consents** Operator: United Utilities Water Limited Property Type: STORM TANK/CSO ON SEWERAGE NETWORK (WATER COMPANY) Location: Water St/Bridge St, Manchester, Greater Manchester Authority: Environment Agency, North West Region Catchment Area: Irwell Reference: 01MAN0174 Permit Version: 1 Effective Date: 1st January 1995 Issued Date: 1st January 1995 Revocation Date: 11th April 2006 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Irwell **Status: Consent revoked or revised: New Consent issued (Section 37(1))** Positional Accuracy: Located by supplier to within 100m	A19NW (NE)	997	2	383320 398360
26	**Enforcement and Prohibition Notices** Location: Manchester Children's Hospital, Gartside Street, MANCHESTER, M3 3FJ Permit Reference: Not Given Enforcement Date: 4th August 1995 Details: Press Release HM269, Breach of conditions relating to accumulation & disposal of radioactive wastes; under RSA93. Positional Accuracy: Unknown	A19SW (NE)	790	2	383285 398129
27	**Integrated Pollution Prevention And Control** Name: Manchester Heat Network Tradeco Limited Location: Manchester Civic Quarter Energy Centre Epr/Jp3700bu, Manchester Civic Quarter Energy Centre, Off Lower Mosley Street, Manchester Authority: Environment Agency, North West Region Permit Reference: JP3700BU Original Permit Ref: Jp3700bu Effective Date: 20th August 2020 **Status: Effective** Application Type: Application App. Sub Type: New Positional Accuracy: Located by supplier to within 10m Activity Code: 25A (a) Activity Description: New Medium Combustion Plant Primary Activity: Y Activity Code: 25B (3) (1) (b) Activity Description: Tranche A SG permitting date 1st October 2019 Primary Activity: N	A14NE (E)	935	2	383710 397670
28	**Local Authority Pollution Prevention and Controls** Name: Hanson Aggregates Location: Potato Wharf, Off Liverpool Road, MANCHESTER, M3 4NB Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/B/03/05/AW Dated: 7th August 1992 Process Type: Local Authority Air Pollution Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A13NE (NE)	88	3	382848 397577
29	**Local Authority Pollution Prevention and Controls** Name: Sainsbury'S Plc Location: 100 Regent Road, SALFORD, Lancashire, M5 4QU Authority: Salford City Council, Environmental Health Department Permit Reference: 23071/010311 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A18SW (NW)	381	4	382524 397829
30	**Local Authority Pollution Prevention and Controls** Name: Shell Phoenix Location: Regent Road, SALFORD, Lancashire, M5 4TS Authority: Salford City Council, Environmental Health Department Permit Reference: 23188/090210 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	403	4	382339 397732

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
31	**Local Authority Pollution Prevention and Controls** Name: Tom Garner Motors Location: Chester Road, MANCHESTER, Lancashire, M15 4GA Authority: Manchester City Council, Environmental Health Department Permit Reference: 43/93 Dated: 21st June 1993 Process Type: Local Authority Air Pollution Control Description: PG6/34 Respraying of road vehicles **Status: Authorised** Positional Accuracy: Automatically positioned to the address	A14SW (E)	501	3	383280 397369
32	**Local Authority Pollution Prevention and Controls** Name: Timpson Ltd (Sainsbury) Location: 100 Regent Road, Salford, M5 4qu Authority: Salford City Council, Environmental Health Department Permit Reference: 123814/241007 Dated: 24th October 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning **Status: Authorisation revoked** Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	502	4	382305 397835
33	**Local Authority Pollution Prevention and Controls** Name: H Jackson Company Location: 84 Oldfield Road, SALFORD, Lancashire, M5 3SR Authority: Salford City Council, Environmental Health Department Permit Reference: 29/33 Dated: 16th June 1994 Process Type: Local Authority Air Pollution Control Description: PG6/34 Respraying of road vehicles **Status: Authorisation revoked** Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	598	4	382220 397888
33	**Local Authority Pollution Prevention and Controls** Name: Synergie - Texaco Service Station Location: Oldfield Road, SALFORD, Lancashire, M5 4NE Authority: Salford City Council, Environmental Health Department Permit Reference: 23297/190912 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG1/14 Petrol filling station **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	624	4	382233 397934
34	**Local Authority Pollution Prevention and Controls** Name: Tarmac (Central) Ltd Location: Pomona Docks, Cornbrook Road, MANCHESTER, M15 4NE Authority: Trafford Metropolitan Borough Council, Environmental Health Department Permit Reference: Ip98 Dated: 16th September 1992 Process Type: Local Authority Air Pollution Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Authorisation revoked** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	627	5	382190 396999
34	**Local Authority Pollution Prevention and Controls** Name: Tilcon Ltd Location: Pomona Docks, Cornbrook Road, MANCHESTER, Lanacashire, M15 4NE Authority: Trafford Metropolitan Borough Council, Environmental Health Department Permit Reference: Not Given Dated: 1st April 1993 Process Type: Local Authority Air Pollution Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Authorisation revoked** Positional Accuracy: Manually positioned to the address or location	A7NE (SW)	631	5	382195 396988
34	**Local Authority Pollution Prevention and Controls** Name: Tilcon Ltd Location: Pomona Docks, Cornbrook Road, MANCHESTER, M15 4NE Authority: Manchester City Council, Environmental Health Department Permit Reference: PPC/26/92 Dated: 1st April 1996 Process Type: Local Authority Air Pollution Control Description: PG3/10 China and ball clay **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 10m	A7NE (SW)	666	3	382174 396960

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
35	**Local Authority Pollution Prevention and Controls** Name: Williams Motor Co Location: 6 Hadfield Street, Cornbrook, MANCHESTER, Lancashire, M16 9FG Authority: Trafford Metropolitan Borough Council, Environmental Health Department Permit Reference: 87 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/34 Respraying of road vehicles **Status: Authorised** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	668	5	382267 396878
36	**Local Authority Pollution Prevention and Controls** Name: Salford Quays Laundry & Dry Cleaning Location: 6 Muslin Street, Salford, M5 4nf Authority: Salford City Council, Environmental Health Department Permit Reference: 122043/280907 Dated: 28th September 2007 Process Type: Local Authority Pollution Prevention and Control Description: PG6/46 Dry cleaning **Status: Permitted** Positional Accuracy: Manually positioned to the address or location	A17NE (NW)	861	4	382254 398228
37	**Local Authority Pollution Prevention and Controls** Name: Cemex Uk Materials Ltd - Readymix Location: Hope Street, SALFORD, Lancashire, M5 4WN Authority: Salford City Council, Environmental Health Department Permit Reference: 7235/041212 Dated: 10th August 1993 Process Type: Local Authority Air Pollution Control Description: PG3/1Blending, packing, loading and use of bulk cement **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A17NE (NW)	875	4	382332 398285
37	**Local Authority Pollution Prevention and Controls** Name: Cemex Uk Materials Ltd - Aggregates Location: Hope Street, SALFORD, Lancashire, M5 4WN Authority: Salford City Council, Environmental Health Department Permit Reference: 8186/250811 Dated: 28th October 1993 Process Type: Local Authority Air Pollution Control Description: Part B - General Mineral Process (No Specific Reference) **Status: Authorised** Positional Accuracy: Manually positioned to the address or location	A17NE (NW)	896	4	382306 398296
38	**Local Authority Pollution Prevention and Controls** Name: Concept Automotive Services Location: Upper Wharfe Street, SALFORD, Lancashire, M5 4TY Authority: Salford City Council, Environmental Health Department Permit Reference: NOT GIVEN Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/34 Respraying of road vehicles **Status: Authorised** Positional Accuracy: Manually positioned to the road within the address or location	A18NW (N)	904	4	382425 398354
38	**Local Authority Pollution Prevention and Controls** Name: Citroen UK Ltd Location: Upper Wharf Street, SALFORD, Lancashire, M5 4PG Authority: Salford City Council, Environmental Health Department Permit Reference: 29/56 Dated: Not Supplied Process Type: Local Authority Air Pollution Control Description: PG6/34 Respraying of road vehicles **Status: Authorised** Positional Accuracy: Manually positioned to the road within the address or location	A18NW (N)	915	4	382400 398357
39	**Local Authority Pollution Prevention and Controls** Name: Trafford Press Ltd Location: 418 Chester Road, MANCHESTER, Lancashire, M16 9HP Authority: Trafford Metropolitan Borough Council, Environmental Health Department Permit Reference: Ip100 Dated: 9th March 1994 Process Type: Local Authority Air Pollution Control Description: PG6/16 Printworks **Status: Authorisation revoked** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	940	5	382256 396571

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
40	**Local Authority Pollution Prevention and Controls** Name: Henry Sutcliffe Location: Hulme Street, SALFORD, Lancashire, M5 Authority: Salford City Council, Environmental Health Department Permit Reference: 30/17 Dated: 30th April 1993 Process Type: Local Authority Air Pollution Control Description: PG6/2 Manufacture of timber and wood-based products **Status: Authorised** Positional Accuracy: Manually positioned to the road within the address or location	A18NW (N)	987	4	382434 398447
	Nearest Surface Water Feature	A13NW (NW)	0	-	382702 397493
41	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Chemicals - Detergents/Surfactant Note: Manchester Ship Canal; Detergent Incident Date: 1st February 1996 Incident Reference: 96650187 Catchment Area: Manchester Ship Canal Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	54	2	382600 397400
42	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Oils - Other Oil Note: Engine Oil Incident Date: 8th January 1995 Incident Reference: 95650025 Catchment Area: Bridgewater Canal Receiving Water: Not Given Cause of Incident: Land Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (W)	133	2	382505 397395
42	**Pollution Incidents to Controlled Waters** Property Type: Connection To Surface Drains Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 2nd November 1995 Incident Reference: 95652741 Catchment Area: Manchester Ship Canal Receiving Water: Not Given Cause of Incident: Wrong Connection Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (W)	138	2	382500 397395
43	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Oils - Unknown Note: Not Supplied Incident Date: 27th October 1992 Incident Reference: 92741897 Catchment Area: Bridgewater Canal Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (S)	133	2	382700 397300
44	**Pollution Incidents to Controlled Waters** Property Type: Private Sewage: Sewage Works And Septic Tanks Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Unknown Sewage Note: Not Supplied Incident Date: 8th November 1992 Incident Reference: 92611933 Catchment Area: Bridgewater Canal Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	134	2	382600 397300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
44	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Not Given Note: None Pollution Found Incident Date: 27th October 1992 Incident Reference: 92741898 Catchment Area: Bridgewater Canal Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	137	2	382605 397295
44	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: Bridgewater Canal Incident Date: 20th April 1995 Incident Reference: 95650862 Catchment Area: Bridgewater Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	139	2	382600 397295
45	**Pollution Incidents to Controlled Waters** Property Type: Road Location: Chester Road , OLD TRAFFORD Authority: Environment Agency, North West Region Pollutant: Oils - Diesel (Including Agricultural) Note: Diesel Spillage; Bridgewater Incident Date: 19th July 1997 Incident Reference: 97651312 Catchment Area: Bridgewater Canal Receiving Water: Canal Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	195	2	382505 397295
45	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Oils - Unknown Note: Not Supplied Incident Date: 27th October 1992 Incident Reference: 92741896 Catchment Area: Bridgewater Canal Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	195	2	382500 397300
45	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Oils - Diesel (Including Agricultural) Note: Bridge Water Canal; Oily Site Drainage Incident Date: 14th May 1996 Incident Reference: 96651037 Catchment Area: Bridgewater Canal Receiving Water: Not Given Cause of Incident: Wrong Connection Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	199	2	382500 397295
46	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Oils - Unknown Note: Not Supplied Incident Date: 15th March 1991 Incident Reference: 91510370 Catchment Area: Bridgewater Canal Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	272	2	382400 397300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
46	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Oils - Waste Oil Note: Bridgewater Canal; Oil Incident Date: 9th September 1996 Incident Reference: 96651986 Catchment Area: Bridgewater Canal Receiving Water: Not Given Cause of Incident: Miscellaneous/Other Pollution Type Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13SW (SW)	274	2	382400 397295
47	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: None Affected; None Pollution Found Incident Date: 8th December 1995 Incident Reference: 95653071 Catchment Area: Bridgewater Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NW (SW)	410	2	382400 397100
48	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: No Water Affected; No Pollution Found Incident Date: 6th February 1995 Incident Reference: 95650237 Catchment Area: Bridgewater Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NW (SW)	493	2	382400 397000
49	**Pollution Incidents to Controlled Waters** Property Type: Pollution Found Source Not Determined Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Oils - Unknown Note: Minor Oil Film Incident Date: 22nd August 1995 Incident Reference: 95612163 Catchment Area: Manchester Ship Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12SE (SW)	494	2	382200 397200
50	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Inert Suspended Solids Note: River Medlock; Cement Washings Incident Date: 21st February 1995 Incident Reference: 95650362 Catchment Area: Medlock Receiving Water: Not Given Cause of Incident: Land Runoff Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (E)	515	2	383300 397400
51	**Pollution Incidents to Controlled Waters** Property Type: Pollution Found Source Not Determined Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Other Note: General Debris Incident Date: 13th September 1994 Incident Reference: 94652060 Catchment Area: Manchester Ship Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NE (SE)	526	2	383000 397000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
52	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Manchester Ship Canal, Exchange Quay, SALFORD Authority: Environment Agency, North West Region Pollutant: Oils - Unknown Note: Quite Alot Of Grey Material Incident Date: 17th September 1998 Incident Reference: SO981692 Catchment Area: Manchester Ship Canal Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	552	2	382200 397100
53	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Industrial Effluent Note: Not Supplied Incident Date: 27th August 1993 Incident Reference: 93711673 Catchment Area: Bridgewater Canal Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NW (SW)	581	2	382400 396900
54	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Oils - Unknown Note: Not Supplied Incident Date: 8th July 1992 Incident Reference: 92611241 Catchment Area: Bridgewater Canal Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14NE (E)	608	2	383400 397500
55	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Moorefield Cres, LOWTON Authority: Environment Agency, North West Region Pollutant: Oils - Unknown Note: Stream Discoloured Incident Date: 30th May 1998 Incident Reference: SO980959 Catchment Area: Glaze Receiving Water: Freshwater Stream/River Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SE (E)	613	2	383400 397400
56	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Inert Suspended Solids Note: Corn Brook Incident Date: 1st December 1995 Incident Reference: 95652893 Catchment Area: Manchester Ship Canal Receiving Water: Not Given Cause of Incident: Inadequate Construction Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	619	2	382200 397000
56	**Pollution Incidents to Controlled Waters** Property Type: Pollution Found Source Not Determined Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Organic Wastes: Unknown Note: Corn Brook Incident Date: 23rd November 1995 Incident Reference: 95652940 Catchment Area: Manchester Ship Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	623	2	382200 396995

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
57	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: No Water Affected; No Pollution Found Incident Date: 6th June 1996 Incident Reference: 96651200 Catchment Area: Manchester Ship Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	631	2	382300 396900
58	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Inert Suspended Solids Note: Corn Brook; Sandy Water Incident Date: 22nd March 1996 Incident Reference: 96650529 Catchment Area: Manchester Ship Canal Receiving Water: Not Given Cause of Incident: Not Given Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	692	2	382200 396900
59	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: Bridge Water Canal; No Pollution Found Incident Date: 11th September 1995 Incident Reference: 95652290 Catchment Area: Bridgewater Canal Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	692	2	382105 396995
59	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 19th September 1994 Incident Reference: 94652158 Catchment Area: Manchester Ship Canal Receiving Water: Not Given Cause of Incident: Inadequate Construction Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	693	2	382100 397000
59	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 5th April 1995 Incident Reference: 95650708 Catchment Area: Manchester Ship Canal Receiving Water: Not Given Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	696	2	382100 396995
60	**Pollution Incidents to Controlled Waters** Property Type: Construction Location: Diesel To Bwc At , Inner Relief Road Scheme, MANCHESTER Authority: Environment Agency, North West Region Pollutant: Oils - Diesel (Including Agricultural) Note: Bridgewater Canal; Diesel Incident Date: 10th December 1997 Incident Reference: 97652026 Catchment Area: Bridgewater Canal Receiving Water: Canal Cause of Incident: Accidental Spillage/Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NW (W)	742	2	381900 397600

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
61	**Pollution Incidents to Controlled Waters** Property Type: Road Location: Mancunian Way , HULME Authority: Environment Agency, North West Region Pollutant: Chemicals - Unknown Note: 20 Litres Of Chemical Irgasol In Drains Incident Date: 7th September 1998 Incident Reference: SO981631 Catchment Area: Manchester Ship Canal Receiving Water: Freshwater Stream/River Cause of Incident: Road Traffic Accident Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SE (E)	762	2	383500 397200
62	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Greater Manchester Authority: Environment Agency, North West Region Pollutant: Unknown Note: Not Supplied Incident Date: 11th July 1995 Incident Reference: 95611699 Catchment Area: Irwell Receiving Water: Not Given Cause of Incident: Other Incident/Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17SW (NW)	834	2	382000 398000
63	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Miscellaneous - Fire water / Foam Note: Not Supplied Incident Date: 17th March 1995 Incident Reference: 95610557 Catchment Area: Manchester Ship Canal Receiving Water: Not Given Cause of Incident: Fire Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17SW (NW)	855	2	381900 397900
64	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Chlorinated Water Note: Not Supplied Incident Date: 10th October 1994 Incident Reference: 94652238 Catchment Area: Bridgewater Canal Receiving Water: Not Given Cause of Incident: Leaking Underground Pipe Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	910	2	382100 396700
65	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, North West Region Pollutant: Industrial Effluent Note: River Irwell; Drum Washings Incident Date: 4th November 1991 Incident Reference: 91611716 Catchment Area: Irwell Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A17NE (NW)	916	2	382100 398200
66	**Prosecutions Relating to Authorised Processes** Location: Comus Street, Salford, Lancashire, M5 3bq Prosecution Text: Company Found Guilty Of Using An Unregistered Radioactive Substance, Polonium 210 Prosecution Act: Rsa93 S32(1)(A) Hearing Date: 26th September 2002 Verdict: Guilty Fine: 3000 Costs: 1377 Positional Accuracy: Manually positioned to the road within the address or location	A17SE (NW)	744	2	382035 397901

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
67	**Prosecutions Relating to Authorised Processes** Location: Hope Street, SALFORD, Lancashire, M5 4WN Prosecution Text: Failure to use BPM to prevent the release of offensive & noxious substances to atmosphere. Prosecution Act: HSWA74 Hearing Date: 7th January 1994 Verdict: Guilty Fine: 8000 Costs: 11000 Positional Accuracy: Manually positioned to the address or location	A17NE (NW)	930	2	382249 398305
68	**Registered Radioactive Substances** Name: Scientific Analysis Laboratories Ltd Location: Hadfield House,9 Hadfield Street,Cornbrook,Old Trafford, MANCHESTER, M16 9FE Authority: Environment Agency, North West Region Permit Reference: CC5568 Dated: 16th June 2008 Process Type: Registration under S7 RSA for the keeping and use of Radioactive materials (was RSA60 S1) Description: Registration under the Act of an open source which is not the subject of an authorisation, or an application for an authorisation **Status: Application has been authorised and any conditions apply to the operator** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	663	2	382347 396835
68	**Registered Radioactive Substances** Name: Scientific Analysis Laboratories Limited (Sal) Location: Hadfield House, 9 Hadfield Street, Old Trafford, M16 9fe Authority: Environment Agency, North West Region Permit Reference: GP3193SJ Dated: Not Supplied Process Type: Not Supplied Description: Not Supplied **Status: Application has been determined by the EA** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	663	2	382348 396834
	River Quality Name: Irwell (Msc) GQA Grade: River Quality E Reach: Salford University To Salford Docks Estimated Distance (km): 8.2 Flow Rate: Flow less than 40 cumecs Flow Type: River Year: 2000	A13NW (W)	0	2	382633 397486
	River Quality Name: Bridgewater Canal GQA Grade: River Quality B Reach: Waters Meeting To Conf Rochdale Canal Estimated Distance (km): 3.6 Flow Rate: Flow greater than 80 cumecs Flow Type: Canal Year: 2000	A13SE (SE)	124	2	382830 397348
	River Quality Name: Bridgewater Canal GQA Grade: River Quality B Reach: Conf Rochdale Canal To Tilting Weir Estimated Distance (km): .4 Flow Rate: Flow greater than 80 cumecs Flow Type: Canal Year: 2000	A13NE (E)	196	2	382988 397498
	River Quality Name: Medlock GQA Grade: River Quality E Reach: Lords Bk To Irwell Estimated Distance (km): 9.5 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A14SW (E)	395	2	383178 397398

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	River Quality Name: Rochdale Canal GQA Grade: River Quality B Reach: Ashton Canal To Knott Mill Estimated Distance (km): 1.8 Flow Rate: Flow greater than 80 cumecs Flow Type: Canal Year: 2000	A14SW (E)	550	2	383335 397398
	River Quality Name: Corn Bk GQA Grade: River Quality C Reach: Qsl At Openshaw To Msc Estimated Distance (km): 5.6 Flow Rate: Flow less than 0.31 cumecs Flow Type: River Year: 2000	A8NE (S)	601	2	382762 396815
69	**River Quality Chemistry Sampling Points** Name: Rochdale Canal Reach: Ashton Canal To Knott Mill Estimated Distance: 1.80 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade D - Fair Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied	A14NW (E)	542	2	383330 397558

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
70	**Substantiated Pollution Incident Register** Authority: Environment Agency - North West Region, South Area Incident Date: 3rd March 2014 Incident Reference: 1213413 Water Impact: Category 2 - Significant Incident Air Impact: Category 2 - Significant Incident Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: Atmospheric Pollutants and Effects: Smoke Pollutant: Contaminated Water: Firefighting Run-Off	A17SE (NW)	681	2	382167 397952
71	**Substantiated Pollution Incident Register** Authority: Environment Agency - North West Region, South Area Incident Date: 14th August 2013 Incident Reference: 1147703 Water Impact: Category 4 - No Impact Air Impact: Category 4 - No Impact Land Impact: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 10m Pollutant: General Biodegradable : Other	A17NE (NW)	849	2	382248 398211
72	**Water Abstractions** Operator: Cds Computer Design Systems Ltd Licence Number: 2569007053 Permit Version: 100 Location: R Irwell At Irwell Works, Ordsall Lane, Salford Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 455 Yearly Rate (m3): 22730 Details: Irwell Works, Ordsall Lane, Salford Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st November 1987 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A13SW (W)	136	2	382500 397400
73	**Water Abstractions** Operator: Manchester Quays Development (Mgy) Ltd Licence Number: Nw/069/0004/019 Permit Version: 1 Location: St Johns Manchester Authority: Environment Agency, North West Region Abstraction: Industrial, Commercial and Public Services: Transfer Between Sources (Post Water Act 2003) Abstraction Type: Water may be abstracted from any point within an area Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: St Johns, Manchester Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 13th September 2019 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	657	2	383094 398099
74	**Water Abstractions** Operator: Her Majesty'S Court Service Licence Number: 2569007089 Permit Version: 2 Location: 2 Boreholes At Gartside Street Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Gartside Street Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th July 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	964	2	383335 398310

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
74	**Water Abstractions** Operator: Bovis Lend Lease Ltd Licence Number: 2569007089 Permit Version: 1 Location: 2 Boreholes At Gartside Street Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Gartside Street Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 28th January 2005 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	964	2	383335 398310
75	**Water Abstractions** Operator: Cemex Uk Materials Ltd Licence Number: 2569007085 Permit Version: 4 Location: Borehole At Hope Street, Salford, Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Hope Street, Salford, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 21st December 2018 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A17NE (NW)	981	2	382190 398330
75	**Water Abstractions** Operator: Cemex Uk Materials Ltd Licence Number: 2569007085 Permit Version: 3 Location: Borehole At Hope Street, Salford, Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Hope Street, Salford, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 17th October 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A17NE (NW)	981	2	382190 398330
75	**Water Abstractions** Operator: Cemex Uk Materials Ltd Licence Number: 2569007085 Permit Version: 2 Location: Borehole At Hope Street, Salford, Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Hope Street, Salford, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 22nd March 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A17NE (NW)	981	2	382190 398330

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
75	**Water Abstractions** Operator: Ready Mixed Concrete (North West) Limited Licence Number: 2569007085 Permit Version: 1 Location: Borehole At Hope Street, Salford, Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Land At Hope Street, Salford, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st November 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A17NE (NW)	981	2	382190 398330
	Water Abstractions Operator: Manchester Metropolitan University Licence Number: Nw/069/0004/003 Permit Version: 1 Location: Borehole At Manchester Metropolitan University Authority: Environment Agency, North West Region Abstraction: Schools and Colleges: Heat Pump Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st January 2015 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9SE (SE)	1181	2	383715 396746
	Water Abstractions Operator: Manchester Metropolitan University Licence Number: Nw/069/0004/003 Permit Version: 1 Location: Borehole At Manchester Metropolitan University Authority: Environment Agency, North West Region Abstraction: Schools and Colleges: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st January 2015 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A9SE (SE)	1181	2	383715 396746
	Water Abstractions Operator: Dunlop Rubber Co Limited Licence Number: 2569007027 Permit Version: Not Supplied Location: Borehole, Cambridge Street, MANCHESTER Authority: Environment Agency, North West Region Abstraction: Cooling Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 1811 Yearly Rate (m3): 154564 Details: Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A15SW (E)	1241	2	384000 397200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Colgate Palmolive Ltd Licence Number: 2569007002 Permit Version: 100 Location: Borehole At 371 Ordsall Lane, Manchester 5 Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 1637 Yearly Rate (m3): 409140 Details: Premises At 371 Ordsall Lane Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 5th December 1985 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A6SE (SW)	1270	2	381605 396695
	Water Abstractions Operator: Cerep Iii Investment R Sarl Licence Number: 2569007001 Permit Version: 102 Location: Manchester Ship Canal At Premises Ordsall Lane Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At 371 Ordsall Lane Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 29th October 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A6SE (SW)	1271	2	381600 396700
	Water Abstractions Operator: Cerep Iii Investment R Sarl Licence Number: 2569007002 Permit Version: 102 Location: Borehole At 371 Ordsall Lane, Manchester 5 Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At 371 Ordsall Lane Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 29th October 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A6SE (SW)	1271	2	381600 396700
	Water Abstractions Operator: Colgate-Palmolive Manufacturing (Uk) Ltd Licence Number: 2569007001 Permit Version: 101 Location: Manchester Ship Canal At Premises Ordsall Lane Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 4910 Yearly Rate (m3): 1363800 Details: Premises At 371 Ordsall Lane Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st December 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A6SE (SW)	1271	2	381600 396700

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Colgate-Palmolive Manufacturing (Uk) Ltd Licence Number: 2569007002 Permit Version: 101 Location: Borehole At 371 Ordsall Lane, Manchester 5 Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At 371 Ordsall Lane Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st December 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A6SE (SW)	1271	2	381600 396700
	Water Abstractions Operator: Colgate Palmolive Ltd Licence Number: 2569007001 Permit Version: 100 Location: Manchester Ship Canal At Premises Ordsall Lane Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 4910 Yearly Rate (m3): 1363800 Details: Premises At 371 Ordsall Lane Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 27th April 1992 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A6SE (SW)	1271	2	381600 396700
	Water Abstractions Operator: North Western Electricity Board Licence Number: 2569006023 Permit Version: Not Supplied Location: Rochdale Canal, Dickinson Street, MANCHESTER Authority: Environment Agency, North West Region Abstraction: Cooling Abstraction Type: Not Supplied Source: Canal Daily Rate (m3): 82 Yearly Rate (m3): 25230 Details: Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A15NE (E)	1325	2	384100 397700
	Water Abstractions Operator: Threlfalls (Salford) Ltd. Licence Number: 2569006009 Permit Version: Not Supplied Location: Four Boreholes, Cook Street, SALFORD Authority: Environment Agency, North West Region Abstraction: Cooling & Manufacturing Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): 977 Yearly Rate (m3): 227300 Details: Additional Purpose: Cooling; Licence Status: Revoked Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A24SW (N)	1345	2	383200 398800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: British Telecommunications Plc Licence Number: 2569007069 Permit Version: 100 Location: Borehole At George St, Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 860 Yearly Rate (m3): 1100 Details: Premises At Rutherford Hse, York St Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A20SE (E)	1402	2	384100 398000
	Water Abstractions Operator: Manchester Metropolitan University Licence Number: Nw/069/0006/003 Permit Version: 2 Location: Borehole 1 At Lower Chatham Street Authority: Environment Agency, North West Region Abstraction: Schools and Colleges: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 4th April 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10NE (E)	1442	2	384180 397091
	Water Abstractions Operator: Manchester Metropolitan University Licence Number: Nw/069/0006/003 Permit Version: 2 Location: Borehole 1 At Lower Chatham Street Authority: Environment Agency, North West Region Abstraction: Schools and Colleges: Heat Pump Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 4th April 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10NE (E)	1442	2	384180 397091
	Water Abstractions Operator: Manchester Metropolitan University Licence Number: Nw/069/0006/003 Permit Version: 1 Location: Borehole 1 At Lower Chatham Street Authority: Environment Agency, North West Region Abstraction: Schools and Colleges: General Use (Medium Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10NE (E)	1442	2	384180 397091

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Manchester Metropolitan University Licence Number: Nw/069/0006/003 Permit Version: 1 Location: Borehole 1 At Lower Chatham Street Authority: Environment Agency, North West Region Abstraction: Schools and Colleges: Heat Pump Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 April Authorised End: 31 March Permit Start Date: 1st April 2011 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A10NE (E)	1442	2	384180 397091
	Water Abstractions Operator: British Telecommunications Plc Licence Number: 2569007070 Permit Version: 101 Location: Borehole At Dial House Chapel Street Salford Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (High Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Dial House, Salford Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2007 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A24SE (NE)	1495	2	383700 398700
	Water Abstractions Operator: British Telecom Licence Number: 2569007070 Permit Version: 100 Location: Borehole At Dial House, Chapel St, Salford Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (High Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 30 Yearly Rate (m3): 45 Details: Premises At Dial House, Salford Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 27th January 1971 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A24SE (NE)	1495	2	383700 398700
	Water Abstractions Operator: West Contracting Licence Number: Nw0690006001 Permit Version: 1 Location: Boreholes At Origin Developments, Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 May Authorised End: 30 September Permit Start Date: 19th January 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A15NE (E)	1604	2	384378 397733

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: West Contracting Licence Number: Nw/069/0006/001 Permit Version: 1 Location: Boreholes At Origin Developments, Manchester Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: Non-Evaporative Cooling Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 May Authorised End: 30 September Permit Start Date: 19th January 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A15NE (E)	1604	2	384378 397733
	Water Abstractions Operator: Hydes Brewery Ltd Licence Number: 2569007009 Permit Version: 103 Location: Borehole At Premises, Moss Lane West Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: 46 Moss Lane West, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 19th July 2018 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A4SW (S)	1673	2	383220 395850
	Water Abstractions Operator: Hydes Brewery Ltd Licence Number: 2569007009 Permit Version: 102 Location: Borehole At Premises, Moss Lane West Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: 46 Moss Lane West Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 12th April 2006 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A4SW (S)	1673	2	383220 395850
	Water Abstractions Operator: Hydes Brewery Ltd Licence Number: 2569007009 Permit Version: 101 Location: Borehole At Premises, Moss Lane West Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 373 Yearly Rate (m3): 66826 Details: 46 Moss Lane West, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 7th October 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A4SW (S)	1673	2	383220 395850

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Hydes Brewery Ltd Licence Number: 2569007009 Permit Version: 101 Location: Borehole At Premises, Moss Lane West Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: 46 Moss Lane West, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 7th October 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A4SW (S)	1673	2	383220 395850
	Water Abstractions Operator: Peel South East Ltd Licence Number: 2569007074 Permit Version: 105 Location: Manchester Ship Canal And Docks At Salford Quays Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st April 2015 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(W)	1727	2	380900 397400
	Water Abstractions Operator: Peel Investments North Ltd Licence Number: 2569007074 Permit Version: 103 Location: Manchester Ship Canal And Docks At Salford Quays Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st August 2005 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(W)	1727	2	380900 397400
	Water Abstractions Operator: Manchester Ship Canal Co Licence Number: 2569007074 Permit Version: 101 Location: Manchester Ship Canal And Docks At Salford Quays Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Salford Quays,Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th January 2003 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(W)	1727	2	380900 397400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Manchester Ship Canal Co Licence Number: 2569007074 Permit Version: 102 Location: Manchester Ship Canal And Docks At Salford Quays Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 10th January 2003 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(W)	1727	2	380900 397400
	Water Abstractions Operator: Manchester Ship Canal Co Licence Number: 2569007074 Permit Version: 100 Location: Manchester Ship Canal And Docks At Salford Quays Authority: Environment Agency, North West Region Abstraction: Other Industrial/Commercial/Public Services: General Cooling (Existing Licences Only) (Low Loss) Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): 3350 Yearly Rate (m3): 318056 Details: Premises At Salford Quays,Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 6th February 1997 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	(W)	1727	2	380900 397400
	Water Abstractions Operator: Heineken Uk Ltd Licence Number: 2569007007 Permit Version: 103 Location: Borehole At Premises Moss Side Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Moss Side, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 8th May 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A5SW (SE)	1905	2	383865 395909
	Water Abstractions Operator: Heineken Uk Ltd Licence Number: 2569007007 Permit Version: 103 Location: Borehole At Premises Moss Side Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: General Cooling (Existing Licences Only) (High Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Moss Side, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 8th May 2014 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A5SW (SE)	1905	2	383865 395909

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Heineken Uk Ltd Licence Number: 2569007007 Permit Version: 102 Location: Borehole At Premises Moss Side Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: General Cooling (Existing Licences Only) (High Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Moss Side, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 23rd November 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A5SW (SE)	1932	2	383900 395900
	Water Abstractions Operator: Heineken Uk Ltd Licence Number: 2569007007 Permit Version: 102 Location: Borehole At Premises Moss Side Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Moss Side, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 23rd November 2009 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A5SW (SE)	1932	2	383900 395900
	Water Abstractions Operator: Scottish And Newcastle Uk Ltd Licence Number: 2569007007 Permit Version: 101 Location: Borehole At Premises Moss Side Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: General Cooling (Existing Licences Only) (High Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Moss Side, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 17th April 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A5SW (SE)	1932	2	383900 395900
	Water Abstractions Operator: Scottish And Newcastle Uk Ltd Licence Number: 2569007007 Permit Version: 101 Location: Borehole At Premises Moss Side Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Moss Side, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 17th April 2008 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A5SW (SE)	1932	2	383900 395900

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Scottish Courage Brewing Ltd Licence Number: 2569007007 Permit Version: 100 Location: Borehole At Premises Moss Side Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: General Cooling (Existing Licences Only) (High Loss) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 900 Yearly Rate (m3): 227000 Details: Premises At Moss Side, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 31st December 2003 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A5SW (SE)	1932	2	383900 395900
	Water Abstractions Operator: Scottish Courage Brewing Ltd Licence Number: 2569007007 Permit Version: 100 Location: Borehole At Premises Moss Side Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Premises At Moss Side, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 31st December 2003 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	A5SW (SE)	1932	2	383900 395900
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole Number 2 At Premises Strangeways Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1966	2	383820 399190
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole (No 2) At Premises, Strangeways, Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Drinking, Cooking, Sanitary, Washing, (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1966	2	383820 399190

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole Number 2 At Premises Strangeways Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Drinking, Cooking, Sanitary, Washing, (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1966	2	383820 399190
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole Number 2 At Premises Strangeways Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Drinking, Cooking, Sanitary, Washing, (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1966	2	383820 399190
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 101 Location: Borehole (No 2) At Premises, Strangeways, Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Drinking, Cooking, Sanitary, Washing, (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): 682 Yearly Rate (m3): 194755 Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 25th May 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1966	2	383820 399190
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 101 Location: Borehole (No 2) At Premises, Strangeways, Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 25th May 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1966	2	383820 399190

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole Number 3 At Premises Strangeways Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Drinking, Cooking, Sanitary, Washing, (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1996	2	383830 399220
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole Number 3 At Premises Strangeways Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1996	2	383830 399220
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole Number 3 At Premises Strangeways Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Drinking, Cooking, Sanitary, Washing, (Small Garden) Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1996	2	383830 399220
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 102 Location: Borehole (No 3) At Premises, Strangeways, Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Water may be abstracted from a single point Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Borehole At Strangeways Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st January 2004 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1996	2	383830 399220

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 101 Location: Borehole (No 3) At Premises, Strangeways, Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Drinking, Cooking, Sanitary, Washing, (Small Garden) Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 25th May 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1996	2	383830 399220
	Water Abstractions Operator: Interbrew Uk Ltd Licence Number: 2569004023 Permit Version: 101 Location: Borehole (No 3) At Premises, Strangeways, Manchester Authority: Environment Agency, North West Region Abstraction: Breweries/Wine: Process Water Abstraction Type: Not Supplied Source: Groundwater Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Strangeways Brewery, Manchester Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 25th May 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(NE)	1996	2	383830 399220
	Groundwater Vulnerability Map Combined Classification: Principle Bedrock Aquifer - Low Vulnerability Combined Vulnerability: Low Combined Aquifer: Productive Bedrock Aquifer, No Superficial Aquifer Pollutant Speed: High Bedrock Flow: Mixed Dilution: 300-550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: Low	A13SE (SE)	0	6	382712 397473
	Groundwater Vulnerability - Soluble Rock Risk None				
	Bedrock Aquifer Designations Aquifer Designation: Principal Aquifer	A13SE (SE)	0	6	382712 397473
	Superficial Aquifer Designations No Data Available				
76	**Source Protection Zones** Name: Not Supplied Source: Environment Agency, Head Office Reference: Not Supplied Type: Zone III (Total Catchment): The total area needed to support the discharge from the protected groundwater source.	A14NE (E)	922	2	383680 397743
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (S)	0	2	382714 397459
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	16	2	382807 397477
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NW (NW)	0	2	382705 397488

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (SE)	2	2	382740 397451
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (NE)	33	2	382803 397545
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	41	2	382833 397499
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (NE)	195	2	382946 397624
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (NE)	218	2	382907 397700
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NW (N)	218	2	382639 397702
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	248	2	383029 397568
	Areas Benefiting from Flood Defences None				
	Flood Water Storage Areas None				
	Flood Defences None				
77	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 61.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SW (SW)	0	7	382667 397422
78	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 119.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 2	A13SE (S)	2	7	382716 397452
79	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 448.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A13NW (N)	3	7	382704 397499
80	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 55.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A13SW (W)	5	7	382623 397454

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
81	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 16.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SW (SW)	8	7	382667 397422
82	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 200.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Bridgewater Canal Catchment Name: Mersey Primacy: 1	A13SE (E)	13	7	382770 397461
83	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 187.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Bridgewater Canal Catchment Name: Mersey Primacy: 1	A13SE (SE)	15	7	382742 397439
84	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 47.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SE (E)	15	7	382770 397461
85	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 154.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irwell Catchment Name: Mersey Primacy: 1	A13NW (W)	58	7	382578 397484
86	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 628.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irwell Catchment Name: Mersey Primacy: 1	A13NW (W)	60	7	382581 397500
87	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 151.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Bridgewater Canal Catchment Name: Mersey Primacy: 1	A13SW (SW)	91	7	382633 397334
88	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 86.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SW (SW)	91	7	382633 397334
89	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 113.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13NE (NE)	159	7	382920 397597

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
90	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 639.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Manchester Ship Canal Catchment Name: Mersey Primacy: 1	A13SW (SW)	165	7	382485 397364
91	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 49.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13NE (E)	165	7	382945 397555
92	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 93.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Bridgewater Canal Catchment Name: Mersey Primacy: 1	A13NE (E)	165	7	382945 397555
93	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 53.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Bridgewater Canal Catchment Name: Mersey Primacy: 1	A13SW (SW)	231	7	382523 397231
94	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 33.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13SW (SW)	231	7	382523 397231
95	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 74.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 2	A13NE (NE)	238	7	382983 397646
96	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 11.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 2	A13NE (NE)	243	7	382970 397672
97	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 48.8 Watercourse Level: Underground Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A13NE (NE)	254	7	382980 397679
98	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A13NE (NE)	254	7	382980 397679

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
99	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 52.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 2	A13NE (E)	257	7	383029 397593
100	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 34.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Bridgewater Canal Catchment Name: Mersey Primacy: 1	A13NE (E)	257	7	383035 397579
101	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 9.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 2	A13NE (NE)	261	7	383017 397629
102	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 58.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A13NE (NE)	265	7	382989 397685
103	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 62.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13NE (NE)	267	7	383020 397638
104	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 12.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Bridgewater Canal Catchment Name: Mersey Primacy: 1	A13SW (SW)	270	7	382471 397223
105	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 708.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Bridgewater Canal Catchment Name: Mersey Primacy: 1	A13SW (SW)	280	7	382459 397221
106	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 285.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Bridgewater Canal Catchment Name: Mersey Primacy: 1	A14NW (E)	281	7	383065 397562
107	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 225.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A14NW (E)	281	7	383065 397562

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
108	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 85.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13NE (NE)	316	7	383044 397695
109	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 86.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A13NE (NE)	316	7	383044 397695
110	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 31.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A18SE (N)	480	7	382886 397991
111	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 329.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irwell Catchment Name: Mersey Primacy: 1	A18SE (N)	480	7	382886 397991
112	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 42.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A14NW (E)	484	7	383276 397513
113	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 19.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Bridgewater Canal Catchment Name: Mersey Primacy: 2	A14NW (E)	484	7	383276 397513
114	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 31.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Bridgewater Canal Catchment Name: Mersey Primacy: 2	A14NW (E)	491	7	383281 397531
115	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 70.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A18SE (N)	499	7	382866 398015
116	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 6.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Bridgewater Canal Catchment Name: Mersey Primacy: 2	A14NW (E)	500	7	383287 397562

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
117	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 11.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A14NW (E)	502	7	383288 397568
118	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 31.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NW (E)	513	7	383299 397572
119	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 71.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A14NW (E)	513	7	383299 397572
120	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 19.1 Watercourse Level: Underground Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A14NW (E)	523	7	383315 397496
121	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6195.1 Watercourse Level: Underground Permanent: True Watercourse Name: Corn Brook Catchment Name: Mersey Primacy: 1	A8NW (SW)	531	7	382439 396938
122	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 29.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A14NW (E)	539	7	383331 397487
123	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 1.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A18SE (N)	550	7	382824 398071
124	**OS Water Network Lines** Watercourse Form: Lock or flight of locks Watercourse Length: 24.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A18SE (N)	551	7	382823 398072
125	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 37.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A14SW (E)	559	7	383351 397468

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
126	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 135.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A18SE (N)	568	7	382807 398090
127	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 69.9 Watercourse Level: Underground Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A14NW (E)	582	7	383370 397565
128	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 299.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A14SW (E)	584	7	383374 397438
129	**OS Water Network Lines** Watercourse Form: Lock or flight of locks Watercourse Length: 24.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A18SW (N)	610	7	382684 398125
130	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 19.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Corn Brook Catchment Name: Mersey Primacy: 1	A7NE (SW)	611	7	382240 396972
131	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 160.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A18SW (N)	628	7	382665 398140
132	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Corn Brook Catchment Name: Mersey Primacy: 1	A7NE (SW)	629	7	382235 396953
133	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Corn Brook Catchment Name: Mersey Primacy: 1	A7NE (SW)	630	7	382232 396953
134	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 211.7 Watercourse Level: Underground Permanent: True Watercourse Name: Corn Brook Catchment Name: Mersey Primacy: 1	A7NE (SW)	634	7	382227 396953

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
135	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 40.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A14NE (E)	651	7	383439 397562
136	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A14NE (E)	681	7	383468 397569
137	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 44.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A14NE (E)	692	7	383480 397563
138	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 4.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A14NE (E)	736	7	383524 397561
139	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 281.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Rochdale Canal Catchment Name: Mersey Primacy: 1	A14NE (E)	740	7	383528 397561
140	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Corn Brook Catchment Name: Mersey Primacy: 1	A7NW (SW)	775	7	382016 396972
141	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irwell Catchment Name: Mersey Primacy: 1	A19NW (NE)	782	7	383110 398231
142	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 856.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Irwell Catchment Name: Mersey Primacy: 1	A19NW (NE)	798	7	383122 398244
143	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 283.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Manchester Ship Canal Catchment Name: Mersey Primacy: 1	A7NW (SW)	800	7	381975 396985

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
144	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 231.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: River Medlock Catchment Name: Mersey Primacy: 1	A14SE (E)	808	7	383595 397393
145	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 1	A19SE (NE)	909	7	383585 397942
146	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 254.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Mersey Primacy: 2	A7SW (SW)	944	7	381988 396752
147	**OS Water Network Lines** Watercourse Form: Canal Watercourse Length: 844.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Bridgewater Canal Catchment Name: Mersey Primacy: 1	A7SW (SW)	947	7	382016 396721

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
148	**Historical Landfill Sites** Licence Holder: Not Supplied Location: Salford, Greater Manchester Name: Wilburn Street Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16529 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Not Supplied EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: E052	A18SW (N)	356	2	382706 397871
149	**Historical Landfill Sites** Licence Holder: Manchester Ship Canal Company Location: Pomona Dock Estate, Off Trafford Road, Stretford Name: Pomona Dock No 1 Operator Location: Port of Manchester, Ship Canal House, King Street, Manchester Boundary Accuracy: As Supplied Provider Reference: EAHLD16554 First Input Date: Not Supplied Last Input Date: Not Supplied Specified Waste Type: Deposited Waste included Inert and Household Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: Not Supplied BGS Ref: Not Supplied Other Ref: RD/LIC/036/76, H028, F039	A7NE (SW)	578	2	382199 397062
150	**Historical Landfill Sites** Licence Holder: British Rail Property Board Location: Oldfield Road, Salford, Greater Manchester Name: Former Ordsall Lane Sidings Operator Location: Not Supplied Boundary Accuracy: As Supplied Provider Reference: EAHLD16525 First Input Date: 1st May 1986 Last Input Date: 31st December 1986 Specified Waste Type: Deposited Waste included Inert Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4200/9121 BGS Ref: Not Supplied Other Ref: E020, RD/LIC/414/85	A17SE (NW)	654	2	382302 398018
151	**Historical Landfill Sites** Licence Holder: Manchester Ship Canal Company Location: Pomona Dock Estate, Off Trafford Road, Stretford Name: Pomona Dock No 2 Operator Location: Port of Manchester, Ship Canal House, King Street, Manchester Boundary Accuracy: As Supplied Provider Reference: EAHLD16564 First Input Date: 31st July 1976 Last Input Date: 31st December 1984 Specified Waste Type: Deposited Waste included Inert Waste EA Waste Ref: 0 Regis Ref: Not Supplied WRC Ref: 4200/9301 BGS Ref: Not Supplied Other Ref: RD/LIC/036/76, H028	A7NE (SW)	785	2	382082 396884
152	**Licensed Waste Management Facilities (Locations)** Licence Number: 50480 Location: Mobile Plant Permit Operator Name: Soil & Water Remediation Ltd Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Mobile Plant **Licence Status: Transferred** Issued: 12th December 2006 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	225	2	382841 397739

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
153	**Licensed Waste Management Facilities (Locations)** Licence Number: 50251 Location: Land/premises At, Trentham Street, Cornbrook, Manchester, M15 4LW Operator Name: P A Bennett, B Bennett, R J Bennett, J A Pesticcio Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: End of Life Vehicles **Licence Status: Issued** Issued: 16th July 2004 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A13SW (SW)	362	2	382380 397184
154	**Licensed Waste Management Facilities (Locations)** Licence Number: 50325 Location: Afos Car Dismantlers, Dinton Street, Cornbrook, Manchester, M15 4WA Operator Name: Mr Arthur Kirk And Mr Wilfred Smith Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Vehicle Depollution Facility <5000 tps **Licence Status: Modified** Issued: 19th May 2005 Last Modified: 29th July 2013 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A8NW (SW)	437	2	382410 397060
155	**Licensed Waste Management Facilities (Locations)** Licence Number: 401934 Location: Duncan Street, Salford, Manchester, M5 3SQ Operator Name: Excalon Limited Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Inert & Excavation Waste TS **Licence Status: Issued** Issued: 17th December 2014 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	660	2	382228 397976
156	**Licensed Waste Management Facilities (Locations)** Licence Number: 104096 Location: Duncan Street, Salford, Lancashire, M5 3SQ Operator Name: Recovered Fuels Shipping Ltd Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Household, Commercial And Industrial Transfer Stations **Licence Status: Revoked** Issued: 28th February 2013 Last Modified: 2nd December 2013 Expires: Not Supplied Suspended: Not Supplied Revoked: 18th September 2014 Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A17SE (NW)	802	2	382038 397995

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
157	**Licensed Waste Management Facilities (Locations)** Licence Number: 53487 Location: Manchester Tippers And Aggregates, Upper Wharf Street, Salford, Lancashire, M5 4TY Operator Name: Canal & River Trust Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Physical Treatment Facilities **Licence Status: Transferred** Issued: 17th August 1998 Last Modified: 2nd December 2013 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A17NE (N)	941	2	382356 398368
158	**Licensed Waste Management Facilities (Locations)** Licence Number: 50065 Location: Land/premises At, West Egerton Street, Salford, Lancashire, M5 4DY Operator Name: European Metal Recycling Ltd Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Metal Recycling Sites (Mixed) **Licence Status: Modified** Issued: 18th July 2002 Last Modified: 25th October 2016 Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A17SW (NW)	973	2	381943 398142
159	**Licensed Waste Management Facilities (Locations)** Licence Number: 53734 Location: 2a Hulme Street, Salford, Lancashire, M5 4PY Operator Name: A Cohen & Co Ltd Operator Location: Not Supplied Authority: Environment Agency - North West Region, South Area Site Category: Metal Recycling Sites (Mixed) **Licence Status: Surrendered** Issued: 17th May 1994 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: 25th March 2002 IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A18NW (N)	977	2	382428 398434
	Local Authority Landfill Coverage Name: Manchester City Council - Had landfill data but passed it to the relevant environment agency		0	8	382712 397473
	Local Authority Landfill Coverage Name: Salford Metropolitan District Council - Has no landfill data to supply		57	4	382579 397500
	Local Authority Landfill Coverage Name: Trafford Metropolitan Borough Council - Has not been able to supply Landfill data		165	5	382501 397340
160	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1994	A13NE (E)	126	-	382913 397527
161	**Potentially Infilled Land (Non-Water)** Bearing Ref: SE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1994	A13SE (SE)	149	-	382872 397358
162	**Potentially Infilled Land (Non-Water)** Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1994	A12NE (W)	430	-	382217 397581
163	**Potentially Infilled Land (Non-Water)** Bearing Ref: W Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1994	A12NW (W)	838	-	381799 397580

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
164	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1994	A17SW (NW)	983	-	381775 397941
165	**Potentially Infilled Land (Non-Water)** Bearing Ref: SW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1994	A7SE (SW)	984	-	382173 396565
166	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A13NE (NE)	103	-	382880 397550
167	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A13NE (NE)	159	-	382921 397596
168	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A13NE (E)	165	-	382952 397532
169	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A13SE (S)	185	-	382782 397279
170	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A13NE (NE)	270	-	383008 397665
171	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A13NE (NE)	273	-	383037 397614
172	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A13SW (SW)	322	-	382431 397190
173	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A8NW (S)	422	-	382684 397003
174	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12SE (W)	440	-	382216 397293
175	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A18SE (N)	497	-	382877 398010
176	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A8NW (SW)	520	-	382421 396957
177	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A12SE (W)	545	-	382088 397366
178	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1896	A14SW (E)	547	-	383339 397462
179	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A7NE (SW)	556	-	382292 397000
180	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A8NW (S)	560	-	382499 396885
181	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A18SE (N)	569	-	382822 398090
182	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A18SE (N)	575	-	382914 398081
183	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A7NE (SW)	587	-	382197 397049

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
184	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A18SE (N)	587	-	382718 398107
185	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12NE (W)	616	-	382054 397678
186	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A14SE (E)	676	-	383440 397289
187	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A18SW (NW)	680	-	382424 398113
188	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A18NE (N)	699	-	382783 398222
189	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A17SE (NW)	705	-	382308 398079
190	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A17SE (NW)	729	-	382076 397927
191	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12SW (SW)	729	-	381968 397137
192	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A8SE (S)	773	-	382858 396678
193	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A7NW (SW)	780	-	381917 397127
194	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A7NE (SW)	811	-	382056 396873
195	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1896	A14SE (E)	812	-	383599 397396
196	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A14NE (E)	849	-	383588 397790
197	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A18NW (N)	864	-	382454 398323
198	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12NW (W)	879	-	381825 397810
199	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A12NW (W)	882	-	381774 397678
200	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A17NE (NW)	924	-	382036 398161
201	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A17NE (NW)	924	-	382151 398243
202	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A7SW (SW)	939	-	382027 396722
203	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1956	A17NE (NW)	955	-	382324 398370
204	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1923	A17NE (N)	955	-	382362 398385

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
205	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A17SW (NW)	963	-	381939 398124
206	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A11NE (W)	987	-	381668 397688
207	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1848	A7SE (SW)	992	-	382064 396625
208	**Registered Landfill Sites** Licence Holder: B.R. London Midland Region Licence Reference: 00414/85 Site Location: Ordsall Lane Sidings, Oldfield Road, Salford, Greater Manchester Licence Easting: 382100 Licence Northing: 398100 Operator Location: 67/87 Hampstead Road, Camden, London Authority: Environment Agency - North West Region, South Area Site Category: Landfill Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st May 1986 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the road within the address or location Boundary Accuracy: Not Applicable Authorised Waste: Brick,Concrete,Slate; Ceramic Materials; Construction Industry Waste; Fibreglass; Glass; Metals; Non Leachate Forming Wastes; Plastics; Soil,Clay,Sand,Stone; Wood Prohibited Waste: Animal Flesh; Chemical Wastes; Foodstuffs; Liquid Wastes; Mat'L Giving Rise To Pollut'G Leachate; Paper/Cardboard; Plasterboard; Sawdust; Sludge Wastes; Textiles; Vegetable Matter; Waste At Temp.Endangering People	A17SE (NW)	837	2	382100 398100
209	**Registered Landfill Sites** Licence Holder: Manchester Ship Canal Co Licence Reference: 00036 Site Location: Pomona Docks 1,2 & 4, Off Trafford Road, Stretford, Manchester, Greater Manchester Licence Easting: 382000 Licence Northing: 396850 Operator Location: Ship Canal House, King Street, MANCHESTER, Greater Manchester, M2 4WX Authority: Environment Agency - North West Region, South Area Site Category: Landfill Max Input Rate: Large (Equal to or greater than 75,000 and less than 250,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 21st March 1978 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Accuracy: Not Applicable Authorised Waste: Construction And Demolition Wastes Prohibited Waste: Liquid Wastes; Poisonous, Noxious, Polluting Wastes; Sludge Wastes	A7NW (SW)	867	2	382000 396850

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
210	**Registered Landfill Sites** Licence Holder: Salford City Council Licence Reference: 00761/92/M1 Site Location: Ordsall Park, Trafford Road, Ordsall, Salford, Greater Manchester Licence Easting: 381650 Licence Northing: 397250 Operator Location: Civic Centre, Chorley Road, Swinton, Greater Manchester Authority: Environment Agency - North West Region, South Area Site Category: Landfill Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source Restrictions: Waste produced/controlled by licence holder Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st June 1992 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the road within the address or location Boundary Accuracy: Not Applicable Authorised Waste: Gmwda Group 1 - Non/V.Slow Decomp.Wast Prohibited Waste: Asbestos Waste Foundry Sand Glass, Pottery,China,Enamel,Ceram.Mica Liquid/Sludge Wastes Mineral Processing Wastes Pretreated Wastes Not Permit.By Lic. Skip Waste Slag Special Wastes Waste In Drums Waste N.O.S. Weathered Tar/Bitumen	A12SW (W)	897	2	381748 397271
211	**Registered Waste Transfer Sites** Licence Holder: Spray Shop Supplies Ltd Licence Reference: 00858/92 Site Location: 2A Manchester Trading Estate, New Elm Road, Water Street, MANCHESTER, Greater Manchester, M3 4JV Operator Location: As Site Address Authority: Environment Agency - North West Region, South Area Site Category: Transfer Max Input Rate: Very Small (Less than 10,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Site exempt from licenceExempt Dated: 1st May 1993 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Max.Storage In Licence Solvents & Thinners Prohibited Waste: Explosive Waste Malodorous Waste Pressurized Containers/Waste Therein Violently Reactive Wastes Waste N.O.S.	A13NE (NE)	262	2	382903 397754

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
212	**Registered Waste Transfer Sites** Licence Holder: Manchester Tippers & Aggregates Ltd Licence Reference: 80041 Site Location: Upper Wharf Street, Oldfield Road, SALFORD, Greater Manchester, M5 4TY Operator Location: As Site Address Authority: Environment Agency - North West Region, South Area Site Category: Transfer Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Operational as far as is knownOperational Dated: 17th August 1998 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Inert Solid Waste Comprising Max.Storage In Licence Max.Waste Permitted By Licence Uncontam. Concrete Uncontam. Sand Uncontam. Soil/Subsoil Prohibited Waste: Asbestos Batteries Bulk Powders Clinical Wastes Contaminated Materials Contaminated Soils Foundry/Moulding Sand Pressurised Containers Sand Filter Materials Spec.Waste (Epa'90:S62/1996 Regs) Waste In Drums Waste In Pressurised Containers Waste N.O.S.	A18NW (N)	920	2	382395 398360
213	**Registered Waste Treatment or Disposal Sites** Licence Holder: Manchester Wharf Steel Ltd Licence Reference: 00587 Site Location: Potato Wharf, MANCHESTER, Greater Manchester, M3 4LA Operator Location: As Site Address Authority: Environment Agency - North West Region, South Area Site Category: Scrapyard Max Input Rate: Small (Equal to or greater than 10,000 and less than 25,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Licence lapsed/cancelled/defunct/not applicable/surrenderedCancelled Dated: 1st May 1996 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the road within the address or location Boundary Quality: Not Supplied Authorised Waste: Associated Non-Scrap Max.Storage Of Ferrous Scrap Pre-Sorted Scrap Metal Incl. Scrap Vehicles Prohibited Waste: Asbestos (Other Than Integral To Veh.) Bulk Powders Clinical Wastes Explosive Waste Highly Reactive Wastes Pcbs And Analogues Pressurised Wastes Or Cont'Rs Special Wastes N.O.S. Waste Drums (Unless Pre-Cleaned) Waste N.O.S.	A13NE (NE)	268	2	382960 397720

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
214	**Registered Waste Treatment or Disposal Sites** Licence Holder: A Cohen & Co (GB) Ltd Licence Reference: 00933 Site Location: 2A Hulme Street, SALFORD, Greater Manchester, M5 4PY Operator Location: Clareville House, 25/27 Oxenden Street, LONDON, Greater London, SW1Y 4EL Authority: Environment Agency - North West Region, South Area Site Category: Scrapyard Max Input Rate: Medium (Equal to or greater than 25,000 and less than 75,000 tonnes per year) Waste Source Restrictions: No known restriction on source of waste Licence Status: Site dormant Dated: 1st May 1994 Preceded By Licence: Not Given Superseded By Licence: Not Given Positional Accuracy: Manually positioned to the address or location Boundary Quality: Not Supplied Authorised Waste: Copper Compounds From Wire Drawing Lead/Acid Batteries (Incl.Plastic) Max.Waste Permitted By Licence Scrap Mach'Y/Equip. - Non-Ferrous Prohibited Waste: Explosive Waste Liquid Waste N.O.S. Press'D Containers Or Waste Therein Waste N.O.S Whether/Not Pack.'Pre-Trt Waste Reacting Violently With Water	A18NW (N)	968	2	382500 398450

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Triassic Rocks (Undifferentiated)	A13SE (SE)	0	1	382712 397473
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: <15 mg/kg	A13SE (SE)	0	1	382712 397473
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13NW (NW)	42	1	382678 397528
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (NW)	65	1	382589 397525
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 30 - 45 mg/kg	A19SE (NE)	831	1	383467 397988
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A19SE (NE)	831	1	383459 398000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A17SW (NW)	834	1	382000 398000

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Rural Soil Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: 100 - 200 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14NE (E)	900	1	383638 397800
215	**BGS Recorded Mineral Sites** Site Name: Pendleton Rail Depot Location: Pendleton, Salford, Greater Manchester Source: British Geological Survey, National Geoscience Information Service Reference: 31708 Type: Rail Depot **Status: Active** Operator: Cemex Uk Materials Ltd. Operator Location: Not Supplied Periodic Type: Carboniferous Geology: Quarry (Hard Rock) Commodity: Crushed Rock Positional Accuracy: Located by supplier to within 10m	A17NE (NW)	927	1	382285 398320
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 382820, 397770 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 20.00 mg/kg Cadmium Measured Concentration: 1.00 mg/kg Chromium Measured Concentration: 68.10 mg/kg Lead Measured Concentration: 232.70 mg/kg Nickel Measured Concentration: 25.60 mg/kg	A13NE (N)	251	1	382820 397770
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 382680, 397160 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 14.90 mg/kg Cadmium Measured Concentration: 0.70 mg/kg Chromium Measured Concentration: 55.90 mg/kg Lead Measured Concentration: 208.80 mg/kg Nickel Measured Concentration: 18.10 mg/kg	A13SW (S)	265	1	382680 397160
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 383070, 397210 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 18.20 mg/kg Cadmium Measured Concentration: 0.70 mg/kg Chromium Measured Concentration: 64.00 mg/kg Lead Measured Concentration: 158.90 mg/kg Nickel Measured Concentration: 27.00 mg/kg	A14SW (SE)	390	1	383070 397210

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 382250, 397680 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 12.90 mg/kg Cadmium Measured Concentration: 0.50 mg/kg Chromium Measured Concentration: 52.90 mg/kg Lead Measured Concentration: 99.90 mg/kg Nickel Measured Concentration: 16.20 mg/kg	A12NE (NW)	441	1	382250 397680
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 383250, 397700 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 16.40 mg/kg Cadmium Measured Concentration: 0.50 mg/kg Chromium Measured Concentration: 48.80 mg/kg Lead Measured Concentration: 147.70 mg/kg Nickel Measured Concentration: 21.10 mg/kg	A14NW (NE)	502	1	383250 397700
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 382150, 397290 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 16.00 mg/kg Cadmium Measured Concentration: 0.60 mg/kg Chromium Measured Concentration: 48.80 mg/kg Lead Measured Concentration: 171.60 mg/kg Nickel Measured Concentration: 18.60 mg/kg	A12SE (W)	503	1	382150 397290
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 382800, 396860 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 10.10 mg/kg Cadmium Measured Concentration: 0.50 mg/kg Chromium Measured Concentration: 42.80 mg/kg Lead Measured Concentration: 70.60 mg/kg Nickel Measured Concentration: 12.90 mg/kg	A8NE (S)	583	1	382800 396860
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 383120, 398090 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 28.10 mg/kg Cadmium Measured Concentration: 0.90 mg/kg Chromium Measured Concentration: 66.10 mg/kg Lead Measured Concentration: 436.60 mg/kg Nickel Measured Concentration: 32.50 mg/kg	A19SW (NE)	662	1	383120 398090

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 382710, 398200 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 18.30 mg/kg Cadmium Measured Concentration: 0.80 mg/kg Chromium Measured Concentration: 50.90 mg/kg Lead Measured Concentration: 215.70 mg/kg Nickel Measured Concentration: 18.60 mg/kg	A18NE (N)	681	1	382710 398200
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 381930, 397710 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 19.60 mg/kg Cadmium Measured Concentration: 0.60 mg/kg Chromium Measured Concentration: 71.10 mg/kg Lead Measured Concentration: 370.90 mg/kg Nickel Measured Concentration: 32.20 mg/kg	A12NW (W)	744	1	381930 397710
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 382240, 396730 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 19.10 mg/kg Cadmium Measured Concentration: 2.60 mg/kg Chromium Measured Concentration: 98.50 mg/kg Lead Measured Concentration: 345.00 mg/kg Nickel Measured Concentration: 29.30 mg/kg	A7SE (SW)	807	1	382240 396730
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 382220, 398190 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 44.20 mg/kg Cadmium Measured Concentration: 3.60 mg/kg Chromium Measured Concentration: 397.30 mg/kg Lead Measured Concentration: 712.40 mg/kg Nickel Measured Concentration: 41.30 mg/kg	A17NE (NW)	844	1	382220 398190
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 383340, 396800 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 27.60 mg/kg Cadmium Measured Concentration: 1.70 mg/kg Chromium Measured Concentration: 66.10 mg/kg Lead Measured Concentration: 192.60 mg/kg Nickel Measured Concentration: 25.30 mg/kg	A9NW (SE)	876	1	383340 396800

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Grid: 381750, 397250 Soil Sample Type: Topsoil Sample Area: Manchester Arsenic Measured Concentration: 19.20 mg/kg Cadmium Measured Concentration: 0.30 mg/kg Chromium Measured Concentration: 64.00 mg/kg Lead Measured Concentration: 172.00 mg/kg Nickel Measured Concentration: 27.60 mg/kg	A12SW (W)	899	1	381750 397250
	BGS Urban Soil Chemistry Averages Source: British Geological Survey, National Geoscience Information Service Sample Area: Manchester Count Id: 300 Arsenic Minimum Concentration: 3.00 mg/kg Arsenic Average Concentration: 28.00 mg/kg Arsenic Maximum Concentration: 1008.00 mg/kg Cadmium Minimum Concentration: 0.30 mg/kg Cadmium Average Concentration: 1.40 mg/kg Cadmium Maximum Concentration: 80.30 mg/kg Chromium Minimum Concentration: 29.00 mg/kg Chromium Average Concentration: 92.00 mg/kg Chromium Maximum Concentration: 1252.00 mg/kg Lead Minimum Concentration: 20.00 mg/kg Lead Average Concentration: 270.00 mg/kg Lead Maximum Concentration: 2687.00 mg/kg Nickel Minimum Concentration: 5.00 mg/kg Nickel Average Concentration: 32.00 mg/kg Nickel Maximum Concentration: 137.00 mg/kg	A13SE (SE)	0	1	382712 397473
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13SE (SE)	0	9	382712 397473
	Man-Made Mining Cavities Easting: 382200 Northing: 397400 Distance: 430 Quadrant Reference: A12 Quadrant Reference: SE Bearing Ref: W Cavity Type: Adit Entry Sandstone Mines Commodity: Sandstone Solid Geology Detail: BUNTER SANDSTONE Superficial Geology Detail: Glacial Gravel	A12SE (W)	430	10	382200 397400
	Non Coal Mining Areas of Great Britain No Hazard				
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	1	382712 397473
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	35	1	382607 397498
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	1	382712 397473

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Potential for Compressible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	5	1	382628 397437
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	35	1	382607 397498
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	1	382712 397473
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	1	382712 397473
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	1	382712 397473
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SW (SW)	5	1	382628 397437
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	1	382712 397473
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (W)	35	1	382607 397498
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13SE (E)	147	1	382935 397444
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	249	1	382519 397680
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	1	382712 397473
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	1	382712 397473

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
216	**Contemporary Trade Directory Entries** Name: Hanson Concrete Location: Potato Wharf, Manchester, M3 4NB Classification: Concrete Contractors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	83	-	382836 397584
217	**Contemporary Trade Directory Entries** Name: E A P International Ltd Location: Unit 6, Manchester Industrial Centre, Water Street, Manchester, Lancashire, M3 4JW Classification: Rubber & Plastic Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	112	-	382793 397634
217	**Contemporary Trade Directory Entries** Name: Robins & Day Location: Unit 6, Manchester Industrial Centre, Water Street, Manchester, M3 4JW Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	112	-	382793 397634
217	**Contemporary Trade Directory Entries** Name: Stratstone Saab Location: Unit 5, Manchester Industrial Centre, Water Street, Manchester, M3 4JW Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (N)	160	-	382797 397682
218	**Contemporary Trade Directory Entries** Name: A Bigger Splash (Manchester) Ltd Location: 40, Ellesmere Street, Manchester, M15 4JY Classification: Greeting Card Publishers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	143	-	382787 397327
218	**Contemporary Trade Directory Entries** Name: Manchester Radiators Location: St. Georges House, 36, Ellesmere Street, Manchester, M15 4JW Classification: Boilers - Servicing, Replacements & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	160	-	382834 397329
218	**Contemporary Trade Directory Entries** Name: Futura Tech (Uk) Location: St. Georges House, 36, Ellesmere Street, Manchester, M15 4JW Classification: Plastics - Raw Materials **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	160	-	382834 397329
218	**Contemporary Trade Directory Entries** Name: Urban Angel Designs Location: St. Georges House, 36, Ellesmere Street, Manchester, Lancashire, M15 4JW Classification: Stationery Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13SE (SE)	160	-	382834 397329
219	**Contemporary Trade Directory Entries** Name: Fast Track Upvc Location: Floor 1, Unit 2,Talbot Mill,Ellesmere St, Manchester, Lancashire, M15 4JY Classification: Window Frame Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13SW (S)	152	-	382683 397275
219	**Contemporary Trade Directory Entries** Name: In Situ Location: Talbot Mill,44 Ellesmere St, Manchester, Lancashire, M15 4FY Classification: Salvage Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13SE (S)	167	-	382720 397271
219	**Contemporary Trade Directory Entries** Name: Eagle Knitwear Location: Talbot Mill, 44, Ellesmere Street, Manchester, M15 4JY Classification: Knitting Yarn Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (S)	169	-	382717 397268

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
219	**Contemporary Trade Directory Entries** Name: Batian Engineering Location: Talbot Mill, 44, Ellesmere Street, Manchester, M15 4JY Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (S)	169	-	382717 397268
219	**Contemporary Trade Directory Entries** Name: A & M Reproductions Location: Talbot Mill, 44, Ellesmere Street, Manchester, M15 4JY Classification: Furniture - Reproduction **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (S)	169	-	382717 397268
219	**Contemporary Trade Directory Entries** Name: Advance Knitwear Location: Talbot Mill, 44, Ellesmere Street, Manchester, M15 4JY Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (S)	169	-	382717 397268
219	**Contemporary Trade Directory Entries** Name: M & R Textiles Ltd Location: Talbot Mill, 44, Ellesmere Street, Manchester, Lancashire, M15 4JY Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13SE (S)	169	-	382717 397268
219	**Contemporary Trade Directory Entries** Name: Vacuum Scientific Services Ltd Location: Talbot Mill, 44, Ellesmere Street, Manchester, M15 4JY Classification: Scientific Apparatus & Instruments - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (S)	169	-	382717 397268
219	**Contemporary Trade Directory Entries** Name: S Ryan Location: Talbot Mill, 44, Ellesmere Street, Manchester, M15 4JY Classification: Window Frame Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (S)	169	-	382717 397268
219	**Contemporary Trade Directory Entries** Name: Kyran Hall Art Glass Studio Location: Talbot Mill, 44, Ellesmere Street, Manchester, Lancashire, M15 4JY Classification: Stained Glass Designers & Producers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13SE (S)	169	-	382717 397268
219	**Contemporary Trade Directory Entries** Name: Hayes Location: Unit 2,Ellesmere St, Manchester, Lancashire, M15 4FY Classification: Bed & Mattress Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13SE (S)	180	-	382735 397264
220	**Contemporary Trade Directory Entries** Name: Spamedica Location: Unit 2 Citygate Central,Blantyre Street, Manchester, Greater Manchester, M15 4SQ Classification: Hospitals **Status: Active** Positional Accuracy: Manually positioned to the address or location	A13SE (E)	161	-	382924 397390
221	**Contemporary Trade Directory Entries** Name: H C Slingsby Plc Location: Unit 1, Derwent Street Trading Estate, Salford, M5 4RE Classification: Machinery - Industrial & Commercial **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (NW)	163	-	382510 397564
221	**Contemporary Trade Directory Entries** Name: Derwent Industrial Services Ltd Location: Derwent Ho,Derwent St, Salford, Lancashire, M5 4RE Classification: Blast Cleaning **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A13NW (NW)	175	-	382504 397575

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
222	**Contemporary Trade Directory Entries** Name: Egerton Narrow Boat Ltd Location: The Arches Boatyard, Potato Wharf, Manchester, M3 4NB Classification: Boatbuilders & Repairers **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A13NE (NE)	170	-	382932 397597
223	**Contemporary Trade Directory Entries** Name: P & K Taxi Services Location: 51, Hulme Hall Road, Manchester, Lancashire, M15 4LY Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	191	-	382508 397297
224	**Contemporary Trade Directory Entries** Name: Pumpcare Technical Services Location: Unit 3, Cornbrook Estate, Ellesmere Street, Manchester, M15 4JY Classification: Pump Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (S)	205	-	382792 397262
224	**Contemporary Trade Directory Entries** Name: Seal Services Ltd Location: Unit 3, Cornbrook Estate, Ellesmere Street, Manchester, M15 4JY Classification: Pumps - Sales, Servicing & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (S)	205	-	382792 397262
225	**Contemporary Trade Directory Entries** Name: Cleaning Ventures Location: 7 Arundel Street, Manchester, Greater Manchester, M15 4JZ Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	205	-	382825 397276
225	**Contemporary Trade Directory Entries** Name: Peter Stone Co Ltd Location: Unit 6, Bentinck Street Industrial Estate, Manchester, M15 4LN Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	241	-	382839 397243
226	**Contemporary Trade Directory Entries** Name: The Snack Co Location: Unit 16/18, Slough Industrial Estate, Ordsall Lane, Salford, M5 4SZ Classification: Food Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (W)	210	-	382446 397557
226	**Contemporary Trade Directory Entries** Name: Fires R Us Location: Unit 7, Slough Industrial Estate, Ordsall Lane, Salford, Lancashire, M5 4SZ Classification: Fireplaces & Mantelpieces **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NW (W)	252	-	382419 397593
227	**Contemporary Trade Directory Entries** Name: Till & Whitehead Ltd Location: Ellesmere Street, Manchester, Lancashire, M15 4JX Classification: Hardware **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (S)	210	-	382690 397218
227	**Contemporary Trade Directory Entries** Name: Grove Galleries Ltd Location: Phoenix House, Ellesmere Street, Manchester, M15 4JY Classification: Art Restoration & Picture Cleaning **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (S)	215	-	382671 397210
227	**Contemporary Trade Directory Entries** Name: G & M Knitwear Ltd Location: Hulme Hall Road, Manchester, M15 4LY Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (S)	237	-	382634 397188
228	**Contemporary Trade Directory Entries** Name: Clare Tooling Systems Ltd Location: Excelsior Works, 2-6, Hulme Hall Road, Manchester, M15 4LY Classification: Hardware **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	213	-	382564 397230

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
228	**Contemporary Trade Directory Entries** Name: F Higginbottom & Son Ltd Location: 10, Hulme Hall Road, Manchester, M15 4LY Classification: Bookbinders **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	228	-	382584 397207
228	**Contemporary Trade Directory Entries** Name: Higginbottom & Son Ltd Location: 10, Hulme Hall Road, Manchester, M15 4LY Classification: Bookbinders **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	228	-	382584 397207
228	**Contemporary Trade Directory Entries** Name: Biddle Sawyer Silks Location: Unit 109, 10, Hulme Hall Road, Manchester, M15 4LY Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	239	-	382588 397194
229	**Contemporary Trade Directory Entries** Name: Great Man Beer Location: Castlefield, Manchester, Greater Manchester, M3 4BB Classification: Brewers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A13NE (NE)	223	-	382962 397651
230	**Contemporary Trade Directory Entries** Name: Robins & Day Location: Unit 3, Manchester Industrial Centre, Water Street, Manchester, Lancashire, M3 4JW Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	225	-	382841 397739
231	**Contemporary Trade Directory Entries** Name: M G Trading Castlefield Location: Flat 1, Ship Canal House, 25, Slate Wharf, Manchester, M15 4SX Classification: Toiletries **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	243	-	383027 397554
232	**Contemporary Trade Directory Entries** Name: Avon Tyres Ltd Location: 8, Blantyre Street, Manchester, M15 4LH Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (E)	246	-	383021 397391
233	**Contemporary Trade Directory Entries** Name: R Lewtas Shopfitters Ltd Location: Unit 12, Bentinck Street Industrial Estate, Manchester, Lancashire, M15 4LN Classification: Joinery Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A13SE (S)	250	-	382743 397191
233	**Contemporary Trade Directory Entries** Name: Star Auto Glass Location: Unit 12, Bentinck Street Industrial Estate, Manchester, M15 4LN Classification: Car Customisation & Conversion Specialists **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (S)	250	-	382743 397191
233	**Contemporary Trade Directory Entries** Name: Jook Design Location: Unit 2, Bentinck Street Industrial Estate, MANCHESTER, M15 4LN Classification: Soft Furnishings - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (S)	255	-	382725 397179
233	**Contemporary Trade Directory Entries** Name: Lloyd Worrall (Manchester) Ltd Location: Unit 1/2, Bentinck Street Industrial Estate, Manchester, M15 4LN Classification: Hardware **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (S)	263	-	382702 397166

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
234	**Contemporary Trade Directory Entries** Name: Spray Shop Supplies Location: 2a, New Elm Road, Manchester, M3 4JH Classification: Car Paint & Lacquer Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	281	-	382914 397769
235	**Contemporary Trade Directory Entries** Name: National Tyres Chester Road Location: 25, Ellesmere Street, Manchester, M15 4LZ Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SW (S)	287	-	382609 397140
235	**Contemporary Trade Directory Entries** Name: National Tyres & Autocare Location: 200 Chester Road, Manchester, Greater Manchester, M15 4LZ Classification: Tyre Dealers **Status: Active** Positional Accuracy: Manually positioned to the address or location	A13SW (S)	287	-	382609 397140
236	**Contemporary Trade Directory Entries** Name: Serck Intertruck Location: Worrall Street, Salford, M5 4TA Classification: Car Radiator Servicing & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (SW)	332	-	382325 397309
236	**Contemporary Trade Directory Entries** Name: Warton Freight Services (Northern) Ltd Location: 14, Worrall Street, Salford, Lancashire, M5 4TH Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (SW)	332	-	382325 397309
237	**Contemporary Trade Directory Entries** Name: Valitus Ltd Location: Elsmere House, Thorncross Close, Manchester, M15 4LU Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	353	-	382450 397134
237	**Contemporary Trade Directory Entries** Name: Villerstrand Ltd Location: Ellesmere Street, Manchester, M15 4LT Classification: Freight Forwarders **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	369	-	382466 397104
238	**Contemporary Trade Directory Entries** Name: Bass Leisure Retail Location: 29, Ellesmere Street, Manchester, M15 4LZ Classification: Brewers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	357	-	382540 397085
238	**Contemporary Trade Directory Entries** Name: Pun Enterprises Location: Phoenix House, Ellesmere Street, Manchester, M15 4JY Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	357	-	382540 397085
238	**Contemporary Trade Directory Entries** Name: Sofa By Designs Location: Ellesmere Street, Manchester, Lancashire, M15 4LT Classification: Seating Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A8NW (SW)	376	-	382505 397078
238	**Contemporary Trade Directory Entries** Name: Insitu Architectural Salvage Location: 252 Chester Road, Manchester, Greater Manchester, M15 4EX Classification: Reclamation Centres **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	386	-	382511 397064
238	**Contemporary Trade Directory Entries** Name: Kyran Hall Art Glass Studio Location: 252, Chester Road, Manchester, M15 4EX Classification: Stained Glass Designers & Producers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	396	-	382503 397057

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
239	**Contemporary Trade Directory Entries** Name: Atlantis Piccadilly Laundry Services Location: 121 Woollam Pl, Manchester, M3 4JJ Classification: Laundries & Launderettes **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A18SE (NE)	366	-	382968 397836
240	**Contemporary Trade Directory Entries** Name: Warton Freight Services Northern Ltd Location: 9, Worrall Street, Salford, M5 4TH Classification: Road Haulage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SE (W)	368	-	382276 397336
240	**Contemporary Trade Directory Entries** Name: Paromatta Tool & Gauge Co Ltd Location: 3, Worrall Street, Salford, M5 4TH Classification: Tool Design, Manufacturers & Makers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (SW)	379	-	382283 397288
240	**Contemporary Trade Directory Entries** Name: S Y Electronics Location: 7, Worrall Street, Salford, Lancashire, M5 4TH Classification: Electronic Component Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	408	-	382242 397314
240	**Contemporary Trade Directory Entries** Name: Centre Glass & Hygiene Location: Paramatta Works, 3, Worrall Street, Salford, M5 4TH Classification: Cleaning Materials & Equipment **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SE (W)	424	-	382219 397334
240	**Contemporary Trade Directory Entries** Name: Crystal Print Ltd Location: Graphic House,Worrall St, Salford, Lancashire, M5 4TH Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A12SE (SW)	443	-	382222 397270
240	**Contemporary Trade Directory Entries** Name: Warton Freight Services (Northern) Ltd Location: 14, Worrall Street, Salford, M5 4TH Classification: Freight Forwarders **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A12SE (W)	444	-	382209 397300
240	**Contemporary Trade Directory Entries** Name: Warton Freight Services Location: 14, Worrall Street, Salford, M5 4TH Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A12SE (W)	444	-	382209 397300
240	**Contemporary Trade Directory Entries** Name: Meridian Reprographics Location: 5, Worrall Street, Salford, M5 4TH Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	445	-	382210 397293
241	**Contemporary Trade Directory Entries** Name: M D Motors Location: Arch 72, Trentham Street, Manchester, M15 4LW Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A13SW (SW)	368	-	382417 397141
242	**Contemporary Trade Directory Entries** Name: Aaa Office Emporium Location: Pryme Works, Silvercroft Street, Manchester, M15 4WG Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	369	-	383117 397307
243	**Contemporary Trade Directory Entries** Name: Pentel Location: Dyer Street, Salford, M5 4TB Classification: Blinds, Awnings & Canopies **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SE (W)	386	-	382245 397392

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
244	**Contemporary Trade Directory Entries** Name: Shell Service Station Location: Regent Road, Salford, Greater Manchester, M5 4TS Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	403	-	382339 397732
244	**Contemporary Trade Directory Entries** Name: Shell Service Station Location: Regent Road, Salford, Greater Manchester, M5 4TS Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	407	-	382352 397750
245	**Contemporary Trade Directory Entries** Name: Atlantis Location: 121, Water Street, Manchester, M3 4JU Classification: Dry Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SE (NE)	403	-	382909 397904
246	**Contemporary Trade Directory Entries** Name: Afos Location: Dinton Street, Manchester, Lancashire, M15 4WA Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A8NW (SW)	426	-	382402 397079
246	**Contemporary Trade Directory Entries** Name: Afos Location: Dinton St, Manchester, Lancashire, M15 4WA Classification: Scrap Metal Merchants **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A8NW (SW)	428	-	382401 397077
246	**Contemporary Trade Directory Entries** Name: C T T Motors Location: 2, Westminster Street, Manchester, M15 4FX Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	430	-	382457 397040
246	**Contemporary Trade Directory Entries** Name: J D Motor Services Location: 1, Westminster Street, Manchester, M15 4FX Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	443	-	382423 397044
246	**Contemporary Trade Directory Entries** Name: M C Autos Location: 1, Westminster Street, Manchester, M15 4FX Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	443	-	382423 397044
246	**Contemporary Trade Directory Entries** Name: Mancunian Spring Location: Cornbrook Road, Manchester, M15 4WB Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Active** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	466	-	382395 397035
247	**Contemporary Trade Directory Entries** Name: Q Street Domestic Appliances Location: 45, Quenby Street, Manchester, M15 4HX Classification: Vacuum Cleaners - Sales & Service **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	431	-	382895 397060
247	**Contemporary Trade Directory Entries** Name: Q Street Domestic Appliances Location: 45, Quenby Street, Manchester, M15 4HX Classification: Washing Machines - Servicing & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	431	-	382895 397060
248	**Contemporary Trade Directory Entries** Name: James & Taylor Ltd Location: Eastagte, 2, Castle Street, Manchester, M3 4LZ Classification: Cladding Suppliers & Installers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	447	-	383235 397554

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
249	**Contemporary Trade Directory Entries** Name: Service Graphics Location: Liverpool Road, Manchester, M3 4AQ Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	455	-	383162 397768
250	**Contemporary Trade Directory Entries** Name: Bennett Bros Metals Recycling Location: Cornbrook Road, Manchester, Greater Manchester, M15 4WB Classification: Recycling Services **Status: Active** Positional Accuracy: Manually positioned to the address or location	A7NE (SW)	483	-	382296 397097
251	**Contemporary Trade Directory Entries** Name: Office World Location: Regents Park, Ordsall Lane, Salford, Lancashire, M5 3TP Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	486	-	382507 397938
251	**Contemporary Trade Directory Entries** Name: Office World Location: Regents Park, Ordsall Lane, Salford, Lancashire, M5 3TP Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (NW)	486	-	382507 397938
252	**Contemporary Trade Directory Entries** Name: Victoria Service Station Location: 6a, Princess Street, Manchester, M15 4HA Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	489	-	382477 396967
252	**Contemporary Trade Directory Entries** Name: Cornbrook Diesel Location: 325, Chester Road, Manchester, M15 4EZ Classification: Fuel Injection Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	489	-	382477 396967
252	**Contemporary Trade Directory Entries** Name: G E S Automotive Location: 325, Chester Road, Manchester, M15 4EZ Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	489	-	382477 396967
252	**Contemporary Trade Directory Entries** Name: Victoria Body Shop Location: 6b, Princess Street, Manchester, M15 4HA Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	489	-	382477 396967
253	**Contemporary Trade Directory Entries** Name: Resistance Technology Ltd Location: 8, Worrall Street, Salford, M5 4TH Classification: Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (SW)	498	-	382174 397243
254	**Contemporary Trade Directory Entries** Name: Tom Garner Location: Chester Road, Manchester, M15 4GA Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	501	-	383280 397369
255	**Contemporary Trade Directory Entries** Name: Timsons Location: 100, Regent Road, Salford, M5 4QU Classification: Dry Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	501	-	382306 397835
255	**Contemporary Trade Directory Entries** Name: Sainsbury'S Petrol Station Location: 100 Regent Road, Salford, Greater Manchester, M5 4QU Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	501	-	382306 397835

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
256	**Contemporary Trade Directory Entries** Name: Mottershead Location: 70 Cornbrook Rd, Manchester, Lancashire, M15 4WB Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A7NE (SW)	510	-	382342 397018
257	**Contemporary Trade Directory Entries** Name: Bright House Trading Location: Flat 46, Ledburn Court, Ledburn Close, Manchester, M15 4HR Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	525	-	382944 396979
257	**Contemporary Trade Directory Entries** Name: Greenhalls Location: Flat 33, Ledburn Court, Ledburn Close, Manchester, M15 4HR Classification: Breakdown and Recovery **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NE (SE)	525	-	382944 396979
258	**Contemporary Trade Directory Entries** Name: Tyrone Davis Location: 628 Cornbrook Pk Rd, Manchester, Lancashire, M15 4EE Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A8NW (SW)	531	-	382479 396922
258	**Contemporary Trade Directory Entries** Name: Bells Autos Location: 347 Chester Road, Manchester, Greater Manchester, M16 9FD Classification: Commercial Vehicle Servicing, Repairs, Parts & Accessories **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A8NW (SW)	542	-	382448 396922
258	**Contemporary Trade Directory Entries** Name: Able Scaffolding Ltd Location: 349, Chester Road, Manchester, M16 9FD Classification: Scaffolding & Work Platforms **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	542	-	382448 396922
258	**Contemporary Trade Directory Entries** Name: Till & Whitehead Ltd Location: 10, Cornbrook Park Road, Manchester, M15 4EE Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	559	-	382466 396897
258	**Contemporary Trade Directory Entries** Name: Cornbrook Garage Location: Unit 6-8 Cornbrook Park Road, Manchester, Greater Manchester, M15 4EE Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A8NW (SW)	560	-	382466 396896
259	**Contemporary Trade Directory Entries** Name: Uk Platforms Location: 2, Worrall Street, Salford, Lancashire, M5 4TH Classification: Scaffolding & Work Platforms **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	531	-	382122 397286
259	**Contemporary Trade Directory Entries** Name: E B L Distributors Location: 249, Ordsall Lane, Salford, Lancashire, M5 3WH Classification: Distribution Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (W)	558	-	382108 397245
260	**Contemporary Trade Directory Entries** Name: Arletti Ltd Location: Grafton Works, Oldham Street, Salford, Lancashire, M5 4NN Classification: Tool Design, Manufacturers & Makers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	555	-	382636 398059
261	**Contemporary Trade Directory Entries** Name: New Look Location: 30, Chancel Avenue, Salford, M5 3SJ Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	556	-	382148 397732

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
261	**Contemporary Trade Directory Entries** Name: New Look Location: 30, Chancel Avenue, Salford, M5 3SJ Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	556	-	382148 397732
262	**Contemporary Trade Directory Entries** Name: Colour Point (Manchester) Ltd Location: Unit 4, Olympia Trading Estate, Great Jackson Street, Manchester, M15 4NP Classification: Photographic Processors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	564	-	383320 397283
262	**Contemporary Trade Directory Entries** Name: Pro2col Imaging Ltd Location: Unit 4, Olympia Trading Estate, Great Jackson Street, Manchester, Lancashire, M15 4NP Classification: Photo & Digital Imaging Bureaus **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (E)	564	-	383320 397283
263	**Contemporary Trade Directory Entries** Name: Scottys Location: 62, Grenham Avenue, Manchester, M15 4HD Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (S)	566	-	382701 396860
264	**Contemporary Trade Directory Entries** Name: Holt Springs (Manchester) Ltd Location: 16, Bridgewater Street, Manchester, M3 4NH Classification: Spring Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	579	-	383347 397656
264	**Contemporary Trade Directory Entries** Name: E E Chrisp Location: 6, Southern Street, Manchester, M3 4WP Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	607	-	383368 397686
265	**Contemporary Trade Directory Entries** Name: Bennett Bros Metal Recycling Location: 25, Cornbrook Arches, Manchester, Lancashire, M15 4WD Classification: Scrap Metal Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	581	-	382245 397009
265	**Contemporary Trade Directory Entries** Name: P Mottershead Location: 70 Cornbrook Arches, Manchester, M15 4WD Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A7NE (SW)	596	-	382245 396988
266	**Contemporary Trade Directory Entries** Name: Woodland Export Packaging Ltd Location: 3, Fairbrother Street, Salford, M5 3EN Classification: Case Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (SW)	586	-	382109 397176
267	**Contemporary Trade Directory Entries** Name: Greengate Motors Location: 57, Middlewood Street, Salford, M5 4RF Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18SW (N)	594	-	382534 398063
268	**Contemporary Trade Directory Entries** Name: Hulley & Kirkwood Consulting Engineers Location: 2, Commercial Street, Manchester, M15 4RQ Classification: Mechanical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	598	-	383389 397440

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
269	**Contemporary Trade Directory Entries** Name: Crown Fire Equipment Location: 23, Whimberry Close, Salford, M5 3WL Classification: Firefighting Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SW (W)	599	-	382029 397429
270	**Contemporary Trade Directory Entries** Name: Gliptone Leather Care Location: 5, Bridgewater Street, Manchester, M3 4NH Classification: Leather Products - Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (E)	601	-	383381 397613
271	**Contemporary Trade Directory Entries** Name: French Auto Parts Location: 355-357, Chester Road, Manchester, M16 9FD Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	602	-	382443 396860
271	**Contemporary Trade Directory Entries** Name: C M Turpin & Son Location: 328, Chester Road, Manchester, Lancashire, M16 9EZ Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (SW)	613	-	382399 396866
272	**Contemporary Trade Directory Entries** Name: N U Oil & Gas Location: Fifth Floor, Castlefield House, Liverpool Road, Manchester, M3 4SB Classification: Oil & Gas Exploration Supplies & Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	605	-	383333 397766
272	**Contemporary Trade Directory Entries** Name: K2 Legal Support Location: Castlefield House, Liverpool Road, Manchester, M3 4SB Classification: Copying & Duplicating Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NW (NE)	606	-	383334 397766
273	**Contemporary Trade Directory Entries** Name: Texaco Location: Oldfield Road, Salford, M5 4NE Classification: Petrol Filling Stations - 24 Hour **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	614	-	382243 397930
273	**Contemporary Trade Directory Entries** Name: Texaco Location: Oldfield Road, Salford, M5 4NE Classification: Petrol Filling Stations - 24 Hour **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	614	-	382243 397930
273	**Contemporary Trade Directory Entries** Name: Texaco Location: Oldfield Road, Salford, M5 4NE Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	624	-	382233 397934
274	**Contemporary Trade Directory Entries** Name: Harverson'S Cleaning & Ironing Service Location: 9, Gloucester Street, Salford, M5 3SG Classification: Ironing & Home Laundry Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	616	-	382089 397750
275	**Contemporary Trade Directory Entries** Name: Williams Service Centre Location: 4, Hadfield Street, Manchester, M16 9FG Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	620	-	382333 396892
275	**Contemporary Trade Directory Entries** Name: Chester Road M O T Centre Location: Unit Rear Of 328 Chester Road, Manchester, M16 9EZ Classification: Mot Testing Centres **Status: Active** Positional Accuracy: Manually positioned to the address or location	A7NE (SW)	623	-	382324 396894

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
275	**Contemporary Trade Directory Entries** Name: Norman Location: Hadfield St, Manchester, M16 9FE Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A7NE (SW)	670	-	382302 396852
276	**Contemporary Trade Directory Entries** Name: L A Design Marketing Location: Palmer House, 11, Virgil Street, Manchester, M15 4ED Classification: Leather Garments & Products **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8NW (S)	623	-	382542 396811
277	**Contemporary Trade Directory Entries** Name: Tilcon Ltd Location: Pomona Docks, Manchester, M15 4NE Classification: Concrete & Mortar Ready Mixed **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	627	-	382190 396999
278	**Contemporary Trade Directory Entries** Name: E5 Domestic Cleaning Location: 34, Gloucester Street, Salford, M5 3RD Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12NE (W)	641	-	382045 397719
279	**Contemporary Trade Directory Entries** Name: R O C Consulting Location: 6 Commercial Street, Manchester, Greater Manchester, M15 4PZ Classification: Engineers - General **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SE (E)	648	-	383432 397379
280	**Contemporary Trade Directory Entries** Name: Whitbread Food Logistics Location: 257, Ordsall Lane, Salford, M5 3WH Classification: Distribution Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SW (SW)	658	-	382028 397175
280	**Contemporary Trade Directory Entries** Name: A & Q Gateway Location: 2, Fairbrother Street, Salford, M5 3EN Classification: Gate Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SW (SW)	658	-	382028 397175
281	**Contemporary Trade Directory Entries** Name: Johnstone'S Layland Decorating Centre Location: Regent Road, Salford, M5 4SX Classification: Painting & Decorating Supplies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	661	-	382115 397868
281	**Contemporary Trade Directory Entries** Name: Lancashire Footwear Ltd Location: Duncan Street, SALFORD, M5 3SQ Classification: Footwear Manufacturers & Wholesale **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	698	-	382080 397884
281	**Contemporary Trade Directory Entries** Name: British Cement Location: Duncan Street, Salford, M5 3SQ Classification: Cement Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	698	-	382080 397884
281	**Contemporary Trade Directory Entries** Name: Garage Equipment Location: Draftwell House, 2, Duncan Street, Salford, Lancashire, M5 3SQ Classification: Garage Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	699	-	382080 397885
282	**Contemporary Trade Directory Entries** Name: Concept Life Sciences Location: 9, Hadfield Street, Manchester, M16 9FE Classification: Laboratories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	663	-	382347 396835

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
283	**Contemporary Trade Directory Entries** Name: Texco Location: 10, Little Peter Street, Manchester, Lancashire, M15 4PS Classification: Textile Manufacturing **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	665	-	383457 397450
283	**Contemporary Trade Directory Entries** Name: John C Hewitt Location: Hewitt Street, Manchester, M15 4GB Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	670	-	383462 397477
283	**Contemporary Trade Directory Entries** Name: G & M Fabrics Location: Symco House,Little Peter St, Manchester, M15 4PS Classification: Pattern Makers - Paper **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A14SE (E)	701	-	383493 397460
284	**Contemporary Trade Directory Entries** Name: Pressed & Polished Location: The Fusion,Middlewood Street, Salford, Lancashire, M5 4LW Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18SW (NW)	666	-	382403 398088
285	**Contemporary Trade Directory Entries** Name: Creative Logistics Ltd Location: Duncan Street, SALFORD, M5 3SQ Classification: Freight Forwarders **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A17SE (NW)	667	-	382162 397929
285	**Contemporary Trade Directory Entries** Name: Ali Autos Location: Unit 34,Duncan St, Salford, Lancashire, M5 3SQ Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A17SE (NW)	675	-	382152 397930
285	**Contemporary Trade Directory Entries** Name: Rf Tyres Location: 34 Duncan St, Salford, Lancashire, M5 3SQ Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A17SE (NW)	681	-	382168 397953
285	**Contemporary Trade Directory Entries** Name: Manchester Auto Electrical Location: 30, Duncan Street, Salford, M5 3SQ Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	681	-	382168 397953
285	**Contemporary Trade Directory Entries** Name: Ali Autos Location: Alis Autos, 32-34, Duncan Street, Salford, M5 3SQ Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	694	-	382145 397950
285	**Contemporary Trade Directory Entries** Name: I S S Service Systems Ltd Location: Duncan St, Salford, Lancashire, M5 3SQ Classification: Cleaning Services - Commercial **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A17SE (NW)	696	-	382128 397936
286	**Contemporary Trade Directory Entries** Name: Williams Body Repair Centre Location: 6, Hadfield Street, Manchester, Lancashire, M16 9FG Classification: Car Body Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	668	-	382267 396878
286	**Contemporary Trade Directory Entries** Name: Williams Location: 6, Hadfield Street, Manchester, M16 9FG Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	668	-	382267 396878

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
287	**Contemporary Trade Directory Entries** Name: Fleetwood Agencies Ltd Location: 6, Porchfield Square, Manchester, M3 4FG Classification: Rubber & Plastic Products - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	669	-	383376 397824
288	**Contemporary Trade Directory Entries** Name: Manchester Pest Control Location: 14, Commercial Street, Manchester, M15 4PZ Classification: Pest & Vermin Control **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	680	-	383460 397358
288	**Contemporary Trade Directory Entries** Name: Pest Control Manchester Location: 14, Commercial Street, Manchester, M15 4PZ Classification: Pest & Vermin Control **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SE (E)	714	-	383497 397369
288	**Contemporary Trade Directory Entries** Name: Everything Mirror Location: 14, Commercial Street, Manchester, M15 4PZ Classification: Mirrors & Decorative Glass **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	714	-	383497 397369
289	**Contemporary Trade Directory Entries** Name: Gazprom Marketing & Trading Retail Ltd Location: 27, Quay Street, Manchester, M3 3GY Classification: Gas Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	685	-	383232 398036
289	**Contemporary Trade Directory Entries** Name: Gazprom Marketing & Trading Location: 27, Quay Street, Manchester, M3 3GY Classification: Gas Companies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	685	-	383232 398036
289	**Contemporary Trade Directory Entries** Name: Gazprom Marketing & Trading Retail Ltd Location: Quay St, Manchester, Lancashire, M3 3GY Classification: Gas Suppliers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A19SW (NE)	726	-	383270 398058
290	**Contemporary Trade Directory Entries** Name: Precast Concrete Structures Location: Oldfield Rd, Salford, Lancashire, M5 4LZ Classification: Concrete Products **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A17SE (NW)	687	-	382352 398084
290	**Contemporary Trade Directory Entries** Name: Youngs Investment Location: Ivy House,1 Liverpool St, Salford, Lancashire, M5 4LY Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	723	-	382348 398123
291	**Contemporary Trade Directory Entries** Name: Pallets Wanted Location: Mancentral Indust Est,47c East Ordsall La, Salford, Lancashire, M5 4RW Classification: Pallets, Crates & Packing Cases **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A18NW (N)	699	-	382692 398216
292	**Contemporary Trade Directory Entries** Name: Autopaint International Location: 293, Deansgate, Manchester, M3 4EW Classification: Car Painters & Sprayers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	701	-	383458 397713
293	**Contemporary Trade Directory Entries** Name: Manchester Pathology Group Location: 27, Byrom Street, Manchester, M3 4PF Classification: Medical & Dental Laboratories **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	701	-	383367 397905

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
294	**Contemporary Trade Directory Entries** Name: Tenens Location: Duncan St, Salford, Lancashire, M5 3SQ Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A17SE (NW)	704	-	382118 397937
295	**Contemporary Trade Directory Entries** Name: Cooksmill Location: Units 2 - 4, Comus Street, Salford, M5 3BQ Classification: Catering Equipment **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	712	-	382078 397904
296	**Contemporary Trade Directory Entries** Name: G T Autos Location: 88, Hewitt Street, MANCHESTER, M15 4GB Classification: Mot Testing Centres **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	713	-	383505 397506
296	**Contemporary Trade Directory Entries** Name: Hobs Legal Docs Location: 4, Whitworth Street West, Manchester, M1 5WY Classification: Copying & Duplicating Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	741	-	383532 397520
296	**Contemporary Trade Directory Entries** Name: Anexsys Location: 4, Whitworth Street West, Manchester, M1 5WY Classification: Copying & Duplicating Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	741	-	383532 397520
297	**Contemporary Trade Directory Entries** Name: Isovitality Nutriceuticals Ltd Location: Great Northern Warehouse, 275, Deansgate, Manchester, M3 4EL Classification: Food Products - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	738	-	383477 397768
297	**Contemporary Trade Directory Entries** Name: Timberwise Uk Ltd Location: Great Northern Warehouse, 275, Deansgate, Manchester, M3 4EL Classification: Damp & Dry Rot Control **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	738	-	383477 397768
297	**Contemporary Trade Directory Entries** Name: Man & Machine Cleaning Location: Great Northern Warehouse, 275, Deansgate, Manchester, M3 4EL Classification: Carpet, Curtain & Upholstery Cleaners **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	738	-	383477 397768
297	**Contemporary Trade Directory Entries** Name: Bright & Beautiful Location: Great Northern Warehouse, 275, Deansgate, Manchester, M3 4EL Classification: Cleaning Services - Domestic **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	739	-	383478 397769
297	**Contemporary Trade Directory Entries** Name: Docutech Solutions Location: Great Northern Warehouse, 275, Deansgate, Manchester, M3 4EL Classification: Photographic Equipment Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	739	-	383478 397769
297	**Contemporary Trade Directory Entries** Name: Studio Macs Location: Great Northern Warehouse, 275, Deansgate, Manchester, M3 4EL Classification: Electrical Heating Equipment & Systems **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	739	-	383478 397769
297	**Contemporary Trade Directory Entries** Name: Scrap Car Now Today Cash Manchester Location: Great Northern Warehouse, 275, Deansgate, Manchester, M3 4EL Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	739	-	383478 397769

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
297	**Contemporary Trade Directory Entries** Name: Cushy Living Location: Unit 24 275, Manchester, Lancashire, M3 4EL Classification: Textile Manufacturing **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A14NE (E)	739	-	383478 397769
297	**Contemporary Trade Directory Entries** Name: Freez Drinks Location: Great Northern Warehouse, 275, Deansgate, Manchester, Lancashire, M3 4EL Classification: Soft Drinks - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	739	-	383478 397769
297	**Contemporary Trade Directory Entries** Name: Bright & Beautiful Location: Box 106,275 Deansgate, Manchester, Greater Manchester, M3 4EL Classification: Cleaning Services - Domestic **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A14NE (E)	739	-	383478 397769
297	**Contemporary Trade Directory Entries** Name: Accountancy & Payroll Services Location: Great Northern Warehouse, 275, Deansgate, Manchester, Lancashire, M3 4EL Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	739	-	383478 397769
297	**Contemporary Trade Directory Entries** Name: Automation Providers Location: Great Northern Warehouse, 275, Deansgate, Manchester, Lancashire, M3 4EW Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	739	-	383478 397769
297	**Contemporary Trade Directory Entries** Name: Dalton Automation Ltd Location: Great Northern Warehouse, 275, Deansgate, Manchester, Lancashire, M3 4EL Classification: Automation Systems & Equipment **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	739	-	383478 397769
297	**Contemporary Trade Directory Entries** Name: Docutech Solutions Ltd Location: Great Northern Warehouse, 275, Deansgate, Manchester, M3 4EL Classification: Photocopiers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	739	-	383478 397769
297	**Contemporary Trade Directory Entries** Name: Rimo Designs Location: 269-273, Deansgate, Manchester, M3 4EW Classification: Carpets & Rugs - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	752	-	383484 397787
298	**Contemporary Trade Directory Entries** Name: Splash Graphix Ltd Location: Unit 6, St Wilfreds Enterprise Centre, Birchvale Close, Manchester, M15 5BJ Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	738	-	383302 396950
298	**Contemporary Trade Directory Entries** Name: Complete Office Printer Support Location: St. Wilfrids Enterprise Centre, Birchvale Close, Manchester, M15 5BJ Classification: Office Equipment Servicing & Maintenance **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NW (SE)	739	-	383296 396943
299	**Contemporary Trade Directory Entries** Name: West Weave Ltd Location: 355-357, City Road, Manchester, M15 4DE Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (S)	741	-	382700 396685

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
299	**Contemporary Trade Directory Entries** Name: Executive Fabric Care Ltd Location: 377, City Road, Manchester, Lancashire, M15 4DE Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (S)	756	-	382657 396668
299	**Contemporary Trade Directory Entries** Name: Executive Fabric Care Ltd Location: 377, City Road, Manchester, Lancashire, M15 4DE Classification: Carpet, Curtain & Upholstery Cleaners **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (S)	756	-	382657 396668
299	**Contemporary Trade Directory Entries** Name: T B A Motors Location: 1, Lucy Street, Manchester, M15 4BX Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (S)	760	-	382674 396664
300	**Contemporary Trade Directory Entries** Name: Watt Energy Ltd Location: River Pl,City Rd East, Manchester, M15 4PG Classification: Gas Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SE (E)	741	-	383510 397300
300	**Contemporary Trade Directory Entries** Name: The Flash Centre Location: Lumiere Clinic, Lumiere Building, 38, City Road East, Manchester, M15 4QN Classification: Photographic Equipment & Supplies - Wholesale **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SE (E)	744	-	383511 397293
301	**Contemporary Trade Directory Entries** Name: Dr'S Batley & Bisset Location: 11, St. John Street, Manchester, M3 4DW Classification: X-Ray Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	745	-	383419 397905
302	**Contemporary Trade Directory Entries** Name: M Travel Minibuses Ltd Location: 25, Cornbrook Park Road, Manchester, M15 4EH Classification: Bus & Coach Operators & Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (S)	747	-	382491 396694
303	**Contemporary Trade Directory Entries** Name: Parkgate Shipping Ltd Location: Third Floor, Byrom House, 21, Quay Street, Manchester, M3 3JD Classification: Freight Forwarders **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SW (NE)	749	-	383345 398013
303	**Contemporary Trade Directory Entries** Name: Direct Line Rescue Location: 17, Quay Street, Manchester, M3 3HN Classification: Car Breakdown & Recovery Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	781	-	383394 398004
304	**Contemporary Trade Directory Entries** Name: Airtech Equipment Location: Millennium House, 366, Chester Road, Manchester, Lancashire, M16 9FH Classification: Air Conditioning Equipment & Systems **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8SW (SW)	756	-	382376 396720
304	**Contemporary Trade Directory Entries** Name: Airtech Hire Location: Millennium House, 366, Chester Road, Manchester, Lancashire, M16 9FH Classification: Air Conditioning Equipment & Systems **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8SW (SW)	756	-	382376 396720
304	**Contemporary Trade Directory Entries** Name: Coolair Location: Millennium House, 366, Chester Road, Manchester, Lancashire, M16 9FH Classification: Air Conditioning Equipment & Systems **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8SW (SW)	756	-	382376 396720

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
304	**Contemporary Trade Directory Entries** Name: Shredfast Location: Millennium House, 366, Chester Road, Manchester, Lancashire, M16 9FH Classification: Shredding Equipment & Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8SW (SW)	756	-	382376 396720
304	**Contemporary Trade Directory Entries** Name: M2 Digital Ltd Location: Unit 4-6, Empress Business Centre, Chester Road, Manchester, M16 9EB Classification: Copying & Duplicating Machines & Supplies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (SW)	782	-	382376 396692
304	**Contemporary Trade Directory Entries** Name: Harrwood Environmental Services Ltd Location: Empress Business Centre,Chester Rd, Manchester, M16 9EA Classification: Cleaning Services - Commercial **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8SW (SW)	800	-	382373 396674
305	**Contemporary Trade Directory Entries** Name: Copybook Press Ltd Location: 45-47 City Road East, Manchester, M15 4PN Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14SE (E)	769	-	383522 397242
306	**Contemporary Trade Directory Entries** Name: M & G Catering Location: 69, Hadfield Street, Manchester, M16 9FE Classification: Catering Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	771	-	382304 396735
306	**Contemporary Trade Directory Entries** Name: Parker Location: 12 Hadfield St, Manchester, Lancashire, M16 9FG Classification: Horticultural Equipment Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A7SE (SW)	776	-	382288 396738
306	**Contemporary Trade Directory Entries** Name: Bauer Millett Ltd Location: 16, Hadfield Street, Manchester, M16 9FG Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	799	-	382269 396723
306	**Contemporary Trade Directory Entries** Name: Bauer Millett Location: 16, Hadfield Street, Manchester, M16 9FG Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	799	-	382269 396723
306	**Contemporary Trade Directory Entries** Name: Paramount Location: Caxton Park,Wright St, Manchester, M16 9EW Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A7SE (SW)	823	-	382282 396688
306	**Contemporary Trade Directory Entries** Name: Delight Uk Cars Ltd Location: 1, Lund Street, Manchester, M16 9EJ Classification: Car Dealers - Used **Status: Active** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	836	-	382252 396689
307	**Contemporary Trade Directory Entries** Name: A Wise Move Waste Location: Unit 4 Allwood St, Salford, Lancashire, M5 4GL Classification: Waste Disposal Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A18NW (N)	775	-	382502 398246
308	**Contemporary Trade Directory Entries** Name: Farrow & Ball Location: 270, Deansgate, Manchester, M3 4JB Classification: Wallpapers & Wall Coverings **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	777	-	383469 397880

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
309	**Contemporary Trade Directory Entries** Name: Newlock Tool Co Location: Casket Works,Cow La, Salford, Lancashire, M5 4NB Classification: Tool Design, Manufacturers & Makers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (NW)	781	-	382383 398206
310	**Contemporary Trade Directory Entries** Name: Manchester Radiator Co Ltd Location: Arch 19, Watson Street, Manchester, M3 4LP Classification: Car Radiator Servicing & Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	792	-	383561 397683
310	**Contemporary Trade Directory Entries** Name: Duffy Motors Manchester Ltd Location: Arch 16-17, Watson Street, Manchester, M3 4LP Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A14NE (E)	798	-	383562 397703
311	**Contemporary Trade Directory Entries** Name: B B G R Ltd Location: Comus Street, Salford, M5 3BQ Classification: Optical Goods - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	797	-	381998 397940
311	**Contemporary Trade Directory Entries** Name: Barloworld Handling Ltd Location: Red Rose Retail Centre, Regent Road, Salford, Lancashire, M5 3GR Classification: Fork Lift Trucks **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	803	-	381969 397910
311	**Contemporary Trade Directory Entries** Name: Screwfix Location: Red Rose Retail Park,Regent Road, Salford, Greater Manchester, M5 3GR Classification: Builders' Merchants **Status: Active** Positional Accuracy: Manually positioned to the address or location	A17SW (NW)	818	-	381968 397935
312	**Contemporary Trade Directory Entries** Name: Rooney'S Of Salford Coach & Minibus Hire Location: Part Warehouse, 2, Duncan Street, Salford, M5 3SQ Classification: Bus & Coach Operators & Stations **Status: Active** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	803	-	382049 398008
313	**Contemporary Trade Directory Entries** Name: Bauer Millett & Co Ltd Location: Lawrence House, 8, Albion Street, Manchester, M1 5NZ Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	809	-	383592 397607
313	**Contemporary Trade Directory Entries** Name: Grand Central Autos Location: 19 Trafford St, Manchester, M1 5LH Classification: Garage Services **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A14NE (E)	821	-	383608 397575
314	**Contemporary Trade Directory Entries** Name: P R G Powerhouse Location: Unit 3, Empress Business Centre, Chester Road, Manchester, Lancashire, M16 9EB Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SW (SW)	809	-	382372 396665
314	**Contemporary Trade Directory Entries** Name: Harrwood Environmental Services Ltd Location: Empress Business Centre,Chester Rd, Manchester, Lancashire, M16 9EA Classification: Cleaning Services - Commercial **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A7SE (SW)	821	-	382331 396668

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
314	**Contemporary Trade Directory Entries** Name: Ellis Design & Print Location: Unit 1, Empress Business Centre, Chester Road, Manchester, M16 9EB Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	828	-	382366 396646
314	**Contemporary Trade Directory Entries** Name: Vacuum Genie Location: Empress Business Centre, 380, Chester Road, Manchester, M16 9EA Classification: Vacuum Cleaners - Sales & Service **Status: Active** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	850	-	382331 396637
314	**Contemporary Trade Directory Entries** Name: I-Pix Location: Empress Business Centre, 380, Chester Road, Manchester, M16 9EA Classification: Lighting Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	850	-	382331 396637
314	**Contemporary Trade Directory Entries** Name: Champbridge Ltd Location: Empress Business Centre, 380, Chester Road, Manchester, M16 9EA Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	850	-	382331 396637
314	**Contemporary Trade Directory Entries** Name: Total Cleaning Location: Empress Business Centre, Chester Road, Manchester, Lancashire, M16 9EA Classification: Commercial Cleaning Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A7SE (SW)	850	-	382331 396637
314	**Contemporary Trade Directory Entries** Name: P S I Inspection Services Ltd Location: Empress Business Centre, Chester Road, Manchester, M16 9EA Classification: Industrial Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	850	-	382331 396637
314	**Contemporary Trade Directory Entries** Name: Ellis Print Location: 380 Empress Business Centre,Chester Rd, Manchester, Lancashire, M16 9EA Classification: Printers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A7SE (SW)	851	-	382330 396636
314	**Contemporary Trade Directory Entries** Name: Wolverson X-Ray Ltd Location: Empress Buildings,380 Chester Rd, Manchester, M16 9EA Classification: X-Ray Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A7SE (SW)	851	-	382330 396636
314	**Contemporary Trade Directory Entries** Name: Tad Tu Location: 380 Chester Rd, Manchester, Lancashire, M16 9EA Classification: Distribution Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A7SE (SW)	851	-	382330 396636
314	**Contemporary Trade Directory Entries** Name: Danny'S Ice Ltd Location: Empress Business Centre,Chester Rd, Manchester, Lancashire, M16 9EA Classification: Pharmaceutical Manufacturers & Distributors **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A7SE (SW)	851	-	382331 396636
314	**Contemporary Trade Directory Entries** Name: Centerpoint Clothing Co Location: Unit 15,Empress Business Centre,Chester Rd, Manchester, Lancashire, M16 9EA Classification: Knitwear Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A7SE (SW)	851	-	382294 396652

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
314	**Contemporary Trade Directory Entries** Name: Scrap Yard In Old Trafford Htt Location: 384, Manchester, Lancashire, m16 9yd Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Manually positioned within the geographical locality	A7SE (SW)	877	-	382336 396606
315	**Contemporary Trade Directory Entries** Name: Windsor Garage Location: 2, Oldfield Road, Salford, M5 4WB Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	810	-	382453 398264
316	**Contemporary Trade Directory Entries** Name: Sheldons Manchester Ltd Location: 26, Liverpool Street, Salford, M5 4LE Classification: Alloys **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	811	-	382282 398187
316	**Contemporary Trade Directory Entries** Name: M A P Engineers Ltd Location: 26, Liverpool Street, Salford, M5 4LE Classification: Engineers - General **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	811	-	382282 398187
316	**Contemporary Trade Directory Entries** Name: Sheldons Manchester Location: 26, Liverpool Street, Salford, M5 4LE Classification: Wheel Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	811	-	382282 398187
316	**Contemporary Trade Directory Entries** Name: Ecosky Enviromental Solutions Location: 38, Liverpool Street, Salford, M5 4LT Classification: Plastics - Extrusion **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	833	-	382240 398189
317	**Contemporary Trade Directory Entries** Name: Ace Decor Ltd Location: Unit 4, Regent Trading Estate, Oldfield Road, Salford, M5 4DE Classification: Painting & Decorating Supplies **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	814	-	382606 398318
318	**Contemporary Trade Directory Entries** Name: New & Used Office Equipment Location: A, 100, Chorlton Road, Manchester, Lancashire, M15 4AP Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A8SE (S)	818	-	383003 396685
319	**Contemporary Trade Directory Entries** Name: Gallagher Motors Location: 6, Lund Street, Manchester, M16 9NN Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	825	-	382182 396746
319	**Contemporary Trade Directory Entries** Name: Manchester Calorifiers Ltd Location: Lund Street, Manchester, M16 9EJ Classification: Heat Exchangers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	825	-	382182 396746
320	**Contemporary Trade Directory Entries** Name: Amek Systems & Controls Ltd Location: Regent Trading Estate, Oldfield Road, Salford, M5 4DE Classification: Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned in the proximity of the address	A18NW (N)	826	-	382581 398324
320	**Contemporary Trade Directory Entries** Name: J Cash Metals Ltd Location: Unit 2-3, Regent Trading Estate, Oldfield Road, Salford, M5 4DE Classification: Scrap Metal Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	835	-	382540 398322

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
321	**Contemporary Trade Directory Entries** Name: Buildings 2 Clean Location: 237-239, Deansgate, Manchester, M3 4EN Classification: Commercial Cleaning Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	828	-	383521 397891
322	**Contemporary Trade Directory Entries** Name: J Cocker Tinsmith Location: Cow Lane, SALFORD, M5 4NB Classification: Sheet Metal Work **Status: Active** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	831	-	382322 398232
322	**Contemporary Trade Directory Entries** Name: L G A Europe Ltd Location: Cow Lane, Salford, M5 4NB Classification: Electrical Goods Sales, Manufacturers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	831	-	382322 398232
323	**Contemporary Trade Directory Entries** Name: Ipec Engineering Location: Unit 13, Empress Business Centre, Chester Road, Manchester, M16 9EB Classification: Electrical Engineers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	835	-	382289 396671
324	**Contemporary Trade Directory Entries** Name: Lotus (Manchester) Location: 229-235, Deansgate, Manchester, Lancashire, M3 4EN Classification: Car Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	837	-	383524 397905
324	**Contemporary Trade Directory Entries** Name: Hobs Repro Location: 244 Deansgate, Manchester, Greater Manchester, M3 4BQ Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	838	-	383503 397945
324	**Contemporary Trade Directory Entries** Name: Hobs On Site Location: 244, Deansgate, Manchester, Lancashire, M3 4BQ Classification: Copying & Duplicating Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	838	-	383503 397945
325	**Contemporary Trade Directory Entries** Name: Kmg Ltd Location: Ivy House, Liverpool Street, Salford, M5 4LY Classification: Nuts, Bolts & Fixings **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	845	-	382171 398162
326	**Contemporary Trade Directory Entries** Name: Autogas Cars Direct Location: 1, City Road East, Manchester, Lancashire, M15 4PN Classification: Car Dealers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14SE (E)	851	-	383625 397305
327	**Contemporary Trade Directory Entries** Name: The Churchill Machine Tools Co Ltd Location: Empress Street, Old Trafford, Manchester, M16 9EN Classification: Precision Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	852	-	382216 396692
328	**Contemporary Trade Directory Entries** Name: T J Autos Location: 19, Lucy Street, Manchester, M15 4BX Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SE (S)	858	-	382788 396577
328	**Contemporary Trade Directory Entries** Name: John Gledhill Location: 19, Lucy Street, Manchester, M15 4BX Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A8SE (S)	858	-	382788 396577

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
329	**Contemporary Trade Directory Entries** Name: Local Transport Projects Location: 2, Hardman Boulevard, Manchester, M3 3AQ Classification: Agricultural Engineers **Status: Active** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	860	-	383288 398216
330	**Contemporary Trade Directory Entries** Name: Scrap My Car Now For Money Manchester Kws Location: 4, Hardman Square, Manchester, M3 3EB Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19NW (NE)	861	-	383358 398160
331	**Contemporary Trade Directory Entries** Name: Industrial Tomography Systems Location: Sunlight House, Quay Street, Manchester, M3 3JZ Classification: Scientific Apparatus & Instruments - Manufacturers **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	865	-	383473 398039
332	**Contemporary Trade Directory Entries** Name: In Our Coats Location: 225, Hulme Street, Hulme, Manchester, M15 5EF Classification: Greeting Card Publishers & Wholesalers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A9NE (SE)	865	-	383555 397075
333	**Contemporary Trade Directory Entries** Name: Greengate Motors Ltd Location: 57, Canal Street, Salford, M5 4ST Classification: Car Body Repairs **Status: Active** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	867	-	382344 398282
334	**Contemporary Trade Directory Entries** Name: One69a Location: Islington Mill, James Street, Salford, M3 5HW Classification: Screen Process Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A18NW (N)	872	-	382620 398380
335	**Contemporary Trade Directory Entries** Name: E F G Matthews Office Furniture Ltd Location: Albion Street, Manchester, M1 5LL Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14NE (E)	873	-	383661 397574
335	**Contemporary Trade Directory Entries** Name: Simon & Simon Location: Lock 90,Trumpet Street, Manchester, Greater Manchester, M1 5LW Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	895	-	383683 397574
336	**Contemporary Trade Directory Entries** Name: Marcus Designs Location: Empress Mill,Empress St, Old Trafford, Manchester, M16 9EN Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A7SE (SW)	880	-	382242 396645
336	**Contemporary Trade Directory Entries** Name: Nyland Location: Empress St, Old Trafford, Manchester, Lancashire, M16 9EN Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A7SE (SW)	881	-	382237 396646
336	**Contemporary Trade Directory Entries** Name: S B T Engineering Services Ltd Location: Atlantic Works,Empress Street, Old Trafford, Manchester, Greater Manchester, M16 9EN Classification: Industrial Engineers **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A7SE (SW)	891	-	382243 396632

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
336	**Contemporary Trade Directory Entries** Name: H Mentesh Location: Empress Works, Empress Street, Old Trafford, Manchester, M16 9EN Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	905	-	382226 396625
336	**Contemporary Trade Directory Entries** Name: Nyland Ltd Location: Empress Works, Empress Street, Old Trafford, Manchester, M16 9EN Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	905	-	382226 396625
336	**Contemporary Trade Directory Entries** Name: Fastvada Ltd Location: Empress Works, Empress Street, Old Trafford, Manchester, M16 9EN Classification: Clothing & Fabrics - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	905	-	382226 396625
337	**Contemporary Trade Directory Entries** Name: Car Care Express Location: Arch 4, Irwell Street, Salford, Lancashire, M3 5EN Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	883	-	382967 398385
337	**Contemporary Trade Directory Entries** Name: Zico Cars Location: Arch 4, Irwell Street, Salford, M3 5EN Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NE (N)	883	-	382967 398385
338	**Contemporary Trade Directory Entries** Name: Gazprom Marketing & Energy Location: 8, First Street, Manchester, M15 4RP Classification: Gas Suppliers **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SE (E)	891	-	383673 397353
339	**Contemporary Trade Directory Entries** Name: Dale Garages Location: 45-47, Oldfield Road, Salford, M5 4NE Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	894	-	382555 398388
339	**Contemporary Trade Directory Entries** Name: Total Location: 45-47, Oldfield Road, Salford, M5 4NE Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	894	-	382555 398388
340	**Contemporary Trade Directory Entries** Name: Call Print Location: 198, Deansgate, Manchester, M3 3NE Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	895	-	383526 398016
340	**Contemporary Trade Directory Entries** Name: Call Print Location: 198, Deansgate, MANCHESTER, M3 3NE Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	895	-	383526 398016
340	**Contemporary Trade Directory Entries** Name: Proteintech Europe Location: 196, Deansgate, Manchester, M3 3WF Classification: Laboratory Equipment, Instruments & Supplies **Status: Active** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	897	-	383525 398021
340	**Contemporary Trade Directory Entries** Name: Northern Image Centre Location: Invicta House, 2-4, Atkinson Street, Manchester, Lancashire, M3 3HH Classification: Copying & Duplicating Services **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A19SE (NE)	916	-	383520 398062

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
341	**Contemporary Trade Directory Entries** Name: Concept Automotive Services Ltd Location: Upper Wharfe St, Salford, Lancashire, M5 4PQ Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A18NW (N)	906	-	382420 398354
342	**Contemporary Trade Directory Entries** Name: Zedkay Textiles Ltd Location: 52 Liverpool St, Salford, Lancashire, M5 4LT Classification: Textile Manufacturing **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	925	-	382180 398260
342	**Contemporary Trade Directory Entries** Name: Cemex Manchester Plant Location: Hope Street, Salford, Greater Manchester, M7 2ES Classification: Sand, Gravel & Other Aggregates **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A17NE (NW)	927	-	382218 398283
342	**Contemporary Trade Directory Entries** Name: Lamscot Textile Manufacturing Location: Linden Court House, 52, Liverpool Street, Salford, Lancashire, M5 4LT Classification: Textile Manufacturing **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A17NE (NW)	929	-	382182 398266
342	**Contemporary Trade Directory Entries** Name: Cemex Salford Asphalt Plant Location: Hope Street, Salford, Greater Manchester, M7 2ES Classification: Sand, Gravel & Other Aggregates **Status: Active** Positional Accuracy: Manually positioned to the road within the address or location	A17NE (NW)	932	-	382215 398288
343	**Contemporary Trade Directory Entries** Name: Burofloor Location: 3, Hardman Street, Manchester, M3 3AW Classification: Carpets & Rugs - Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19NE (NE)	926	-	383454 398156
343	**Contemporary Trade Directory Entries** Name: Laserox Location: 3, Hardman Street, Manchester, M3 3HF Classification: Medical Equipment Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19NE (NE)	926	-	383454 398156
343	**Contemporary Trade Directory Entries** Name: Epos Manchester Location: Unit 1-3 Hardman Street, Manchester, Greater Manchester, M1 1AG Classification: Computer Manufacturers **Status: Active** Positional Accuracy: Manually positioned to the address or location	A19NE (NE)	930	-	383454 398162
343	**Contemporary Trade Directory Entries** Name: Merlin Repair Specialists Ltd Location: 3, Hardman Street, Manchester, M3 3HF Classification: Bath Resurfacing **Status: Active** Positional Accuracy: Automatically positioned to the address	A19NE (NE)	942	-	383466 398167
344	**Contemporary Trade Directory Entries** Name: Deliverall Direct Location: Warehouse 3, Duncan Street, Salford, M5 3SQ Classification: Distribution Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	926	-	381889 398010
345	**Contemporary Trade Directory Entries** Name: C G (Europe) Ltd Location: Enterprise House, 15, Whitworth Street West, Manchester, Lancashire, M1 5WG Classification: China & Glassware Manufacturers & Repairs **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	930	-	383721 397526

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
346	**Contemporary Trade Directory Entries** Name: Corner House Publications Location: 2 Tony Wilson Place, Manchester, Greater Manchester, M15 4FN Classification: Distribution Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A15SW (E)	934	-	383726 397459
347	**Contemporary Trade Directory Entries** Name: Trafford Press Ltd Location: 418, Chester Road, Manchester, M16 9HP Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	940	-	382256 396571
347	**Contemporary Trade Directory Entries** Name: Trafford Press Ltd Location: 418, Chester Road, Manchester, M16 9HP Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	940	-	382256 396571
348	**Contemporary Trade Directory Entries** Name: Stone Superstone Location: 431, Chester Road, Manchester, M16 9HA Classification: Tile Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (S)	941	-	382334 396539
348	**Contemporary Trade Directory Entries** Name: C S Systems Location: 435, Chester Road, Manchester, M16 9HA Classification: Computer Manufacturers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (S)	952	-	382323 396531
349	**Contemporary Trade Directory Entries** Name: Redgrave Motors Location: 91-97, Liverpool Street, Salford, M5 4LG Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NE (NW)	941	-	382043 398188
349	**Contemporary Trade Directory Entries** Name: Salford Salvage Location: 99-101, Liverpool Street, Salford, M5 4LG Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NW (NW)	986	-	382011 398221
349	**Contemporary Trade Directory Entries** Name: Salford Salvage Location: 99-101, Liverpool Street, Salford, M5 4LG Classification: Car Breakers & Dismantlers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17NW (NW)	986	-	382011 398221
350	**Contemporary Trade Directory Entries** Name: Autotrader Location: 1, Tony Wilson Place, Manchester, M15 4FN Classification: Car Dealers - Used **Status: Active** Positional Accuracy: Automatically positioned to the address	A15SW (E)	942	-	383729 397382
350	**Contemporary Trade Directory Entries** Name: Auto Trader Location: 1, Tony Wilson Place, Manchester, M15 4FN Classification: Car Customisation & Conversion Specialists **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A15SW (E)	949	-	383735 397371
351	**Contemporary Trade Directory Entries** Name: Liverpool Street Motors Location: 71 Liverpool St, Salford, Lancashire, M5 4LG Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Manually positioned to the road within the address or location	A17NE (NW)	945	-	382074 398217
352	**Contemporary Trade Directory Entries** Name: Easy Cars Location: 5, Hulme Street, Salford, Lancashire, M5 4PX Classification: Car Dealers - Used **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A18NW (N)	949	-	382470 398420

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
353	**Contemporary Trade Directory Entries** Name: Kinnarps (Uk) Ltd Location: Colchester House, 38-40, Peter Street, Manchester, M2 5GP Classification: Office Furniture & Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	959	-	383644 397937
353	**Contemporary Trade Directory Entries** Name: R M R I Ltd Location: 44, Peter Street, Manchester, Lancashire, M2 5GP Classification: Materials Handling Equipment **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A19SE (NE)	972	-	383661 397930
354	**Contemporary Trade Directory Entries** Name: Global Garage Location: 52, Chorlton Road, Manchester, M15 4AU Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A8SE (S)	960	-	382955 396513
355	**Contemporary Trade Directory Entries** Name: Belle Design & Print Location: Unit 6, 325, Ordsall Lane, Salford, M5 3LW Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	963	-	381830 396908
355	**Contemporary Trade Directory Entries** Name: Belle Design & Print Location: Unit 6, 325, Ordsall Lane, Salford, M5 3LW Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	963	-	381830 396908
356	**Contemporary Trade Directory Entries** Name: Jawads Frozen Foods Ltd Location: Unit 4-5, Caxton Park, Wright Street, Manchester, M16 9EW Classification: Frozen Food Processors & Distributors **Status: Active** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	964	-	382167 396591
356	**Contemporary Trade Directory Entries** Name: D R Signworks Location: Unit 4-5, Caxton Park, Wright Street, Manchester, M16 9EW Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	964	-	382167 396591
356	**Contemporary Trade Directory Entries** Name: Cm Reprographics Location: Wright Street, Manchester, M16 9EW Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	964	-	382167 396591
356	**Contemporary Trade Directory Entries** Name: Appleyard Press Location: Unit 7, Caxton Park, Wright Street, Manchester, M16 9EW Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	995	-	382136 396573
356	**Contemporary Trade Directory Entries** Name: Michigan Design & Print Location: Unit 7, Caxton Park, Wright Street, Manchester, M16 9EW Classification: Printers **Status: Active** Positional Accuracy: Automatically positioned to the address	A7SE (SW)	999	-	382142 396564
357	**Contemporary Trade Directory Entries** Name: New World Of Leather Location: 1, Phoebe Street, Salford, M5 3PJ Classification: Leather Products - Manufacturers & Suppliers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A17SW (NW)	973	-	381764 397899
358	**Contemporary Trade Directory Entries** Name: Outstanding Beers Location: Unit 1 Foundry,325 Ordsall Lane, Salford, Greater Manchester, M5 3LW Classification: Brewers **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	978	-	381777 396965

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
359	**Contemporary Trade Directory Entries** Name: Multi Metal Stockholders Ltd Location: 7-19, Hulme Street, Salford, M5 4PY Classification: Non-Ferrous Metals **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A18NW (N)	995	-	382393 398439
360	**Fuel Station Entries** Name: Castlefield Travellers Check Location: Dawson Street , , Manchester, Greater Manchester, M3 4JZ Brand: OBSOLETE Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Approximate location provided by supplier	A13SE (E)	29	-	382813 397463
361	**Fuel Station Entries** Name: Sainsburys Salford Location: 100, Regent Road Ordsall Lane, , Salford, Greater Manchester, M5 4QU Brand: Sainsburys Premises Type: Hypermarket **Status: Open** Positional Accuracy: Manually positioned to the address or location	A18SW (NW)	381	-	382524 397829
362	**Fuel Station Entries** Name: Shell Phoenix Location: Regent Road , , Salford, Greater Manchester, M5 4TS Brand: SHELL Premises Type: Petrol Station **Status: Open** Positional Accuracy: Automatically positioned to the address	A12NE (NW)	403	-	382339 397732
363	**Fuel Station Entries** Name: Castlefield Service Station Location: 14, Great Jackson Street , Castlefield , Manchester, Greater Manchester, M15 4NG Brand: Obsolete Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Automatically positioned to the address	A14SW (E)	499	-	383248 397279
364	**Fuel Station Entries** Name: Mfg Oldfield Road Location: Oldfield Road Duncan Street, , Salford, Greater Manchester, M5 4NE Brand: Jet Premises Type: Petrol Station **Status: Open** Positional Accuracy: Automatically positioned to the address	A17SE (NW)	624	-	382233 397934
365	**Fuel Station Entries** Name: Cornbrook Service Station Location: 326, Chester Road , , Manchester, Greater Manchester, M16 9EZ Brand: OBSOLETE Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Located by supplier to within 100m	A8NW (SW)	636	-	382420 396832
366	**Fuel Station Entries** Name: Redgrave Motors Location: 91-97, Liverpool Street , , Salford, Greater Manchester, M5 4LG Brand: UNBRANDED Premises Type: Not Applicable **Status: Obsolete** Positional Accuracy: Manually positioned to the address or location	A17NE (NW)	943	-	382035 398184
367	**Points of Interest - Commercial Services** Name: Scrap Yard Location: M15 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A13NE (NE)	63	11	382833 397556
367	**Points of Interest - Commercial Services** Name: Scrap Yard Location: Not Supplied Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	65	11	382835 397556
368	**Points of Interest - Commercial Services** Name: Manchester Auto Electrical Ltd Location: 38 Ellesmere Street, Manchester, M15 4JY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (SE)	160	11	382834 397329

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
368	**Points of Interest - Commercial Services** Name: Andrew's Auto Repairs Location: Unit 6, Bentinck Street Industrial Estate, Bentinck Street Ind Est, Manchester, M15 4LN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (SE)	241	11	382839 397243
368	**Points of Interest - Commercial Services** Name: Invincible Contracts Supplies Location: Unit 4, Bentinck Street, Manchester, M15 4LN Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A13SE (S)	246	11	382787 397215
369	**Points of Interest - Commercial Services** Name: Dochertys Motor Engineers Location: 50 Hulme Hall Road, Manchester, M15 4LY Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SW (SW)	171	11	382520 397314
370	**Points of Interest - Commercial Services** Name: R & R Location: Unit 12, Bentinck Street Industrial Estate, Manchester, M15 4LN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SE (S)	251	11	382743 397190
371	**Points of Interest - Commercial Services** Name: National Tyres and Autocare Location: 200 Chester Road, Manchester, M15 4LZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SW (S)	287	11	382609 397140
371	**Points of Interest - Commercial Services** Name: National Tyres and Autocare Location: 25 Ellesmere Street, Manchester, M15 4LZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SW (S)	287	11	382609 397140
372	**Points of Interest - Commercial Services** Name: Serck Intertruck Location: Worrall Street, Salford, M5 4TA Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12SE (SW)	332	11	382325 397309
372	**Points of Interest - Commercial Services** Name: Serck Intertruck Location: Worrall Street, Salford, M5 4TA Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12SE (SW)	332	11	382325 397309
372	**Points of Interest - Commercial Services** Name: Warton Freight Services Northern Ltd Location: 9 Worrall Street, Salford, M5 4TH Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A12SE (W)	368	11	382276 397336
372	**Points of Interest - Commercial Services** Name: Warton Freight Services Northern Ltd Location: 9 Worrall Street, Salford, M5 4TH Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A12SE (W)	369	11	382276 397335
373	**Points of Interest - Commercial Services** Name: M D Motors Location: Arch 72, Trentham Street, Manchester, M15 4LW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13SW (SW)	368	11	382416 397141
374	**Points of Interest - Commercial Services** Name: Sainsburys Salford Location: 100 Regent Road, Ordsall Lane, Salford, M5 4QU Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A13NW (NW)	378	11	382487 397805

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
374	**Points of Interest - Commercial Services** Name: Car Wash Location: 100 Regent Road, Ordsall Lane, Salford, Lancashire, M5 4QU Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A18SW (NW)	381	11	382524 397829
375	**Points of Interest - Commercial Services** Name: C T T Motors Location: 2 Westminster Street, Manchester, M15 4FX Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SW)	430	11	382457 397040
375	**Points of Interest - Commercial Services** Name: C T T Motors Location: 2 Westminster Street, Manchester, M15 4FX Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SW)	430	11	382457 397040
375	**Points of Interest - Commercial Services** Name: J D Motor Services Location: 1 Westminster Street, Manchester, M15 4FX Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SW)	443	11	382423 397044
375	**Points of Interest - Commercial Services** Name: J D Motor Services Location: 1 Westminster Street, Manchester, M15 4FX Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SW)	443	11	382423 397044
375	**Points of Interest - Commercial Services** Name: Breakers Yard Location: M15 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A8NW (SW)	445	11	382383 397069
375	**Points of Interest - Commercial Services** Name: Mancunian Spring Co Location: Cornbrook Road, Manchester, M15 4WB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SW)	471	11	382391 397032
375	**Points of Interest - Commercial Services** Name: Mancunian Spring Location: Cornbrook Road, Manchester, M15 4WB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SW)	472	11	382390 397031
376	**Points of Interest - Commercial Services** Name: Breakers Yard Location: M15 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A7NE (SW)	482	11	382296 397098
376	**Points of Interest - Commercial Services** Name: Bennett Bros Metals Recycling Location: Cornbrook Road, Manchester, M15 4WB Category: Recycling Services Class Code: Recycling, Reclamation and Disposal Positional Accuracy: Positioned to address or location	A7NE (SW)	483	11	382296 397097
377	**Points of Interest - Commercial Services** Name: Chester Road MOT Centre Location: 325 Chester Road, Manchester, M15 4EZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SW)	489	11	382477 396967
377	**Points of Interest - Commercial Services** Name: Victoria Service Station Location: 6a Princess Street, Manchester, M15 4HA Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SW)	490	11	382476 396966

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
377	**Points of Interest - Commercial Services** Name: Victoria Body Shop Location: 6b Princess Street, Manchester, M15 4HA Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A8NW (SW)	490	11	382476 396966
377	**Points of Interest - Commercial Services** Name: Cornbrook Garage Location: Unit 6-8 Cornbrook Park Road, Manchester, M15 4EE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SW)	497	11	382480 396957
377	**Points of Interest - Commercial Services** Name: Tyrone Davis Location: 6 Cornbrook Park Road, Manchester, M15 4EE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SW)	531	11	382479 396922
378	**Points of Interest - Commercial Services** Name: Breakers Yard Location: M15 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A7NE (SW)	580	11	382246 397009
378	**Points of Interest - Commercial Services** Name: Bennett Bros Metal Recycling Location: 25 Cornbrook Arches, Manchester, M15 4WD Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A7NE (SW)	581	11	382245 397009
378	**Points of Interest - Commercial Services** Name: Bennett Bros Metal Recycling Location: 25 Cornbrook Arches, Manchester, M15 4WD Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A7NE (SW)	581	11	382245 397009
379	**Points of Interest - Commercial Services** Name: French Auto Parts Location: 355-357 Chester Road, Manchester, M16 9FD Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8NW (SW)	602	11	382443 396860
380	**Points of Interest - Commercial Services** Name: Williams Service Centre Location: 4 Hadfield Street, Manchester, M16 9FG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7NE (SW)	620	11	382333 396892
380	**Points of Interest - Commercial Services** Name: Chester Road M O T Centre Location: Unit Rear Of 328 Chester Road, Old Trafford, Manchester, M16 9EZ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7NE (SW)	624	11	382323 396893
380	**Points of Interest - Commercial Services** Name: Williams Body Repair Centre (Manchester) Location: 6 Hadfield Street, Manchester, M16 9FG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7NE (SW)	668	11	382267 396878
380	**Points of Interest - Commercial Services** Name: Williams Body Repair Centre Location: 6 Hadfield Street, Manchester, M16 9FG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7NE (SW)	668	11	382266 396878
381	**Points of Interest - Commercial Services** Name: The Dash Doctor Location: 321 Deansgate, Manchester, M3 4LQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	645	11	383424 397622

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
382	**Points of Interest - Commercial Services** Name: Al Madina Motors Location: Unit 1, Fairbrother Street, Salford, Greater Manchester, M5 3EN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A12SW (SW)	659	11	382028 397175
383	**Points of Interest - Commercial Services** Name: Pest Control Manchester Location: 14 Commercial Street, Manchester, M15 4PZ Category: Contract Services Class Code: Pest and Vermin Control Positional Accuracy: Positioned to address or location	A14SE (E)	679	11	383460 397358
384	**Points of Interest - Commercial Services** Name: Manchester Auto Electrical Ltd Location: 30 Duncan Street, Salford, M5 3SQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17SE (NW)	681	11	382168 397953
385	**Points of Interest - Commercial Services** Name: Manchester Auto Electrical Ltd Location: Draftwell House 2, Duncan Street, Salford, M5 3SQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17SE (NW)	699	11	382080 397885
386	**Points of Interest - Commercial Services** Name: G T Autos Location: 88 Hewitt Street, Manchester, M15 4GB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	707	11	383499 397502
387	**Points of Interest - Commercial Services** Name: Automation Providers Location: 277 Deansgate, Manchester, M3 4EW Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	733	11	383474 397763
388	**Points of Interest - Commercial Services** Name: G E Middleton & Co Ltd Location: 359-363 City Road, Manchester, M15 4DE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8SW (S)	746	11	382679 396678
388	**Points of Interest - Commercial Services** Name: G E Middleton & Co Ltd Location: 359-363 City Road, Manchester, M15 4DE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8SW (S)	746	11	382679 396678
389	**Points of Interest - Commercial Services** Name: Norman Road Haulage Services Location: 69 Hadfield Street, Manchester, M16 9FE Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A7SE (SW)	771	11	382304 396735
389	**Points of Interest - Commercial Services** Name: Bauer Millett Services Ltd Location: 16 Hadfield Street, Manchester, M16 9FG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7SE (SW)	799	11	382269 396723
389	**Points of Interest - Commercial Services** Name: Bauer Millett Ltd Location: 16 Hadfield Street, Manchester, M16 9FG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7SE (SW)	799	11	382269 396723
390	**Points of Interest - Commercial Services** Name: Crystal Valeters Location: 34 Regent Square, Salford, M5 3RQ Category: Personal, Consumer and other Services Class Code: Vehicle Cleaning Services Positional Accuracy: Positioned to address or location	A12NW (W)	777	11	381908 397744

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
391	**Points of Interest - Commercial Services** Name: Autoglass Location: Comus Street, Salford, M5 3BQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17SW (NW)	797	11	381998 397940
391	**Points of Interest - Commercial Services** Name: Autoglass Location: Comus Street, Salford, M5 3BQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17SW (NW)	797	11	381998 397940
391	**Points of Interest - Commercial Services** Name: Autoglass Location: Comus Street, Salford, M5 3BQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17SW (NW)	797	11	381998 397940
391	**Points of Interest - Commercial Services** Name: Autoglass Location: Comus Street, Salford, M5 3BQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17SW (NW)	797	11	381998 397940
392	**Points of Interest - Commercial Services** Name: Duffy Motors Ltd Location: Arch 16-17, Watson Street, Manchester, M3 4LP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	799	11	383563 397703
392	**Points of Interest - Commercial Services** Name: Duffy Motors Manchester Ltd Location: Arch 16-17, Watson Street, Manchester, M3 4LP Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	804	11	383567 397709
393	**Points of Interest - Commercial Services** Name: M G Mechanical Services Location: 82 Hewitt Street, Manchester, M15 4GB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	801	11	383593 397498
394	**Points of Interest - Commercial Services** Name: Windsor Garage Location: 2 Oldfield Road, Salford, M5 4WB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NW (N)	810	11	382453 398264
394	**Points of Interest - Commercial Services** Name: Windsor Garage Location: 2 Oldfield Road, Salford, M5 4WB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NW (N)	810	11	382453 398264
395	**Points of Interest - Commercial Services** Name: Gallagher Motors Location: 6 Lund Street, Manchester, M16 9NN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7SE (SW)	825	11	382182 396746
396	**Points of Interest - Commercial Services** Name: J Cocker (Tinsmith) Ltd Location: Cow Lane, Salford, M5 4NB Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A17NE (NW)	831	11	382322 398232
396	**Points of Interest - Commercial Services** Name: J Cocker Tinsmith Location: Cow Lane, Salford, M5 4NB Category: Construction Services Class Code: Metalworkers Including Blacksmiths Positional Accuracy: Positioned to address or location	A17NE (NW)	831	11	382321 398231

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
396	**Points of Interest - Commercial Services** Name: Greengate Motors Location: 57 Canal Street, Salford, M5 4ST Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17NE (NW)	867	11	382344 398282
396	**Points of Interest - Commercial Services** Name: Greengate Motors Ltd Location: 57 Canal Street, Salford, M5 4ST Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17NE (NW)	867	11	382344 398282
397	**Points of Interest - Commercial Services** Name: J Cash Metals Ltd Location: Unit 3 Regent Trading Estate, Oldfield Road, Salford, M5 4DE Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A18NW (N)	835	11	382540 398322
397	**Points of Interest - Commercial Services** Name: J Cash Metals Ltd Location: Unit 2-3 Regent Trading Estate, Oldfield Road, Salford, M5 4DE Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A18NW (N)	835	11	382540 398322
397	**Points of Interest - Commercial Services** Name: Dale Garages Location: 45-47 Oldfield Road, Salford, M5 4NE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NW (N)	894	11	382555 398388
398	**Points of Interest - Commercial Services** Name: Tad Tu Location: 380 Chester Rd, Manchester, Lancashire, M16 9EA Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A7SE (SW)	851	11	382330 396636
399	**Points of Interest - Commercial Services** Name: T J Autos Location: 19 Lucy Street, Manchester, M15 4BX Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8SE (S)	858	11	382788 396577
400	**Points of Interest - Commercial Services** Name: Car Care Express Location: Arch 4, Irwell Street, Salford, M3 5EN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NE (N)	883	11	382967 398385
400	**Points of Interest - Commercial Services** Name: Carcare Express N W Ltd Location: Arch 4, Irwell Street, Salford, M3 5EN Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A18NE (N)	883	11	382967 398385
401	**Points of Interest - Commercial Services** Name: Kickstart Motorcycles Location: 77 Arches, Whitworth Street West, Manchester, M1 5WQ Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14NE (E)	910	11	383702 397496
401	**Points of Interest - Commercial Services** Name: Corner House Publications Location: 2 Tony Wilson Place, Manchester, M15 4FN Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A15SW (E)	934	11	383726 397459
402	**Points of Interest - Commercial Services** Name: Redgrave Motors Location: 91-97 Liverpool Street, Salford, M5 4LG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17NE (NW)	941	11	382043 398188

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
402	**Points of Interest - Commercial Services** Name: Redgrave Motors Location: 91-97 Liverpool Street, Salford, M5 4LG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A17NE (NW)	941	11	382042 398187
402	**Points of Interest - Commercial Services** Name: Scrap Yard Location: M5 Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to address or location	A17NW (NW)	973	11	382006 398199
402	**Points of Interest - Commercial Services** Name: Scrap Yard Location: Not Supplied Category: Recycling Services Class Code: Scrap Metal Merchants Positional Accuracy: Positioned to an adjacent address or location	A17NW (NW)	977	11	382010 398208
403	**Points of Interest - Commercial Services** Name: Global Garage Location: 52 Chorlton Road, Manchester, M15 4AU Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A8SE (S)	960	11	382955 396513
404	**Points of Interest - Education and Health** Name: NHS Nightingale Hospital North West Location: Windmill Street, Manchester, M2 3GX Category: Health Practitioners and Establishments Class Code: Hospitals Positional Accuracy: Positioned to address or location	A14NE (E)	929	11	383685 397748
405	**Points of Interest - Manufacturing and Production** Name: The Box Works Location: M15 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13SE (SE)	55	11	382773 397417
406	**Points of Interest - Manufacturing and Production** Name: Works Location: M15 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	100	11	382852 397591
406	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	104	11	382856 397592
406	**Points of Interest - Manufacturing and Production** Name: Factory Location: M3 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	167	11	382861 397668
407	**Points of Interest - Manufacturing and Production** Name: Works Location: M15 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13SW (S)	112	11	382686 397317
408	**Points of Interest - Manufacturing and Production** Name: Tank Location: M15 Category: Industrial Features Class Code: Tanks (Generic) Positional Accuracy: Positioned to an adjacent address or location	A13SE (E)	132	11	382916 397437
409	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13NW (W)	177	11	382458 397502

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
409	**Points of Interest - Manufacturing and Production** Name: Slough Industrial Centre Location: M5 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A13NW (W)	201	11	382468 397573
410	**Points of Interest - Manufacturing and Production** Name: Works Location: M15 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A13SW (S)	204	11	382695 397225
411	**Points of Interest - Manufacturing and Production** Name: Excelsior Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13SW (SW)	230	11	382556 397215
411	**Points of Interest - Manufacturing and Production** Name: Excelsior Works Location: M15 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13SW (SW)	236	11	382543 397214
412	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13SW (SW)	298	11	382477 397182
412	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A13SW (SW)	325	11	382494 397140
413	**Points of Interest - Manufacturing and Production** Name: Works Location: M5 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A12SE (SW)	437	11	382234 397258
414	**Points of Interest - Manufacturing and Production** Name: Factory Location: M15 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SW (SE)	451	11	383163 397226
415	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8NW (SW)	465	11	382393 397037
415	**Points of Interest - Manufacturing and Production** Name: Works Location: M15 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8NW (SW)	468	11	382389 397036
416	**Points of Interest - Manufacturing and Production** Name: Factory Location: M15 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A8NW (S)	530	11	382512 396913
416	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8NW (SW)	591	11	382444 396870

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
416	**Points of Interest - Manufacturing and Production** Name: Factory Location: M16 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A8NW (SW)	594	11	382442 396868
417	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	616	11	382186 397880
417	**Points of Interest - Manufacturing and Production** Name: Works Location: M5 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A17SE (NW)	617	11	382183 397879
418	**Points of Interest - Manufacturing and Production** Name: Factory Location: M15 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A8NW (S)	625	11	382543 396808
419	**Points of Interest - Manufacturing and Production** Name: Works Location: M15 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	635	11	383425 397434
419	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	639	11	383429 397435
419	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	663	11	383452 397416
419	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	667	11	383457 397435
419	**Points of Interest - Manufacturing and Production** Name: Works Location: M15 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	668	11	383460 397481
419	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	672	11	383464 397482
419	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	705	11	383495 397432
419	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14NE (E)	775	11	383567 397482

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
420	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	638	11	382397 398053
420	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18SW (NW)	647	11	382385 398057
421	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	658	11	382349 396839
421	**Points of Interest - Manufacturing and Production** Name: Works Location: M16 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	661	11	382345 396838
421	**Points of Interest - Manufacturing and Production** Name: Factory Location: M16 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A7NE (SW)	677	11	382319 396834
421	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	682	11	382317 396830
421	**Points of Interest - Manufacturing and Production** Name: Works Location: M16 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	732	11	382246 396814
422	**Points of Interest - Manufacturing and Production** Name: St Wilfrid's Enterprise Centre Location: M15 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	723	11	383284 396953
422	**Points of Interest - Manufacturing and Production** Name: Firmstart Ltd Location: St. Wilfrids Enterprise Centre, Birchvale Close, Manchester, M15 5BJ Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A9NW (SE)	739	11	383296 396943
422	**Points of Interest - Manufacturing and Production** Name: Firmstart Manchester Ltd Location: St. Wilfrids Enterprise Centre, Birchvale Close, Manchester, M15 5BJ Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A9NW (SE)	739	11	383296 396943
422	**Points of Interest - Manufacturing and Production** Name: St Wilfrid's Enterprise Centre Location: M15 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	741	11	383311 396954
423	**Points of Interest - Manufacturing and Production** Name: Works Location: M3 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A19NW (NE)	761	11	383055 398232

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
424	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	762	11	383543 397353
424	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A14SE (E)	784	11	383564 397345
425	**Points of Interest - Manufacturing and Production** Name: Works Location: M15 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A8SW (S)	764	11	382665 396660
426	**Points of Interest - Manufacturing and Production** Name: Factory Location: M16 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A7SE (SW)	779	11	382301 396728
426	**Points of Interest - Manufacturing and Production** Name: Empress Business Centre Location: M16 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	809	11	382337 396679
426	**Points of Interest - Manufacturing and Production** Name: Empress Business Centre Location: M16 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	817	11	382317 396678
426	**Points of Interest - Manufacturing and Production** Name: Empress Business Centre Location: Empress Business Centre 380, Chester Road, Manchester, M16 9EA Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A7SE (SW)	850	11	382331 396637
426	**Points of Interest - Manufacturing and Production** Name: Bizspace Empress Business Centre Location: Empress Business Centre 380, Chester Road, Manchester, M16 9EA Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A7SE (SW)	851	11	382330 396636
427	**Points of Interest - Manufacturing and Production** Name: Factory Location: M16 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A7SE (SW)	799	11	382256 396730
427	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	836	11	382182 396732
427	**Points of Interest - Manufacturing and Production** Name: Works Location: M16 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	839	11	382179 396731
427	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	864	11	382211 396680

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
427	**Points of Interest - Manufacturing and Production** Name: Works Location: M16 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	867	11	382208 396679
427	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	876	11	382186 396682
427	**Points of Interest - Manufacturing and Production** Name: Works Location: M16 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	878	11	382183 396681
427	**Points of Interest - Manufacturing and Production** Name: Works Location: M16 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7SE (SW)	911	11	382232 396615
428	**Points of Interest - Manufacturing and Production** Name: Centre Enterprise Location: M15 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A9SW (SE)	814	11	383203 396781
429	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A17NE (NW)	849	11	382167 398164
429	**Points of Interest - Manufacturing and Production** Name: Factory Location: M5 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A17NE (NW)	851	11	382169 398168
429	**Points of Interest - Manufacturing and Production** Name: Factory Location: M5 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A17NE (NW)	887	11	382179 398216
429	**Points of Interest - Manufacturing and Production** Name: Factory Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A17NE (NW)	892	11	382180 398222
430	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A17NE (NW)	849	11	382354 398267
430	**Points of Interest - Manufacturing and Production** Name: Works Location: M5 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A17NE (NW)	850	11	382349 398266
431	**Points of Interest - Manufacturing and Production** Name: Works Location: M5 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	859	11	381878 397028

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
431	**Points of Interest - Manufacturing and Production** Name: Works Location: M5 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	867	11	381889 396995
432	**Points of Interest - Manufacturing and Production** Name: Locus Properties Ltd Location: 19 Albion Wharf, Manchester, M1 5LN Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A14NE (E)	872	11	383660 397574
433	**Points of Interest - Manufacturing and Production** Name: Works Location: M5 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	903	11	381839 397008
433	**Points of Interest - Manufacturing and Production** Name: Works Location: M5 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	958	11	381811 396947
434	**Points of Interest - Manufacturing and Production** Name: Works Location: M5 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A17NE (NW)	907	11	382223 398263
434	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A17NE (NW)	989	11	382168 398326
434	**Points of Interest - Manufacturing and Production** Name: Works Location: M5 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A17NE (NW)	990	11	382163 398325
435	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18NW (N)	909	11	382556 398404
436	**Points of Interest - Manufacturing and Production** Name: The Words Business Centre Location: 19 Ralli Courts, New Bailey Street, Salford, M3 5FT Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A19NW (NE)	927	11	383165 398365
436	**Points of Interest - Manufacturing and Production** Name: The Words Business Centre Location: 19 Ralli Courts, New Bailey Street, Salford, M3 5FT Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to address or location	A19NW (NE)	927	11	383165 398365
437	**Points of Interest - Manufacturing and Production** Name: Works Location: M5 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to address or location	A18NW (N)	945	11	382432 398402
437	**Points of Interest - Manufacturing and Production** Name: Works Location: Not Supplied Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A18NW (N)	949	11	382426 398403

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
438	**Points of Interest - Public Infrastructure** Name: Hulme Junction Location: M15 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to an adjacent address or location	A13SE (E)	10	11	382778 397470
439	**Points of Interest - Public Infrastructure** Name: Bus Depot Location: M15 Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to an adjacent address or location	A13SW (SW)	82	11	382602 397358
440	**Points of Interest - Public Infrastructure** Name: Weir Location: M3 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	241	11	382970 397670
440	**Points of Interest - Public Infrastructure** Name: Weir Location: M3 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	244	11	382970 397674
440	**Points of Interest - Public Infrastructure** Name: Weir Location: M3 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	261	11	382983 397685
440	**Points of Interest - Public Infrastructure** Name: Weir Location: M3 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A13NE (NE)	262	11	382986 397683
441	**Points of Interest - Public Infrastructure** Name: Weir Location: M3 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	361	11	383144 397574
441	**Points of Interest - Public Infrastructure** Name: Weir Location: M3 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	365	11	383148 397575
442	**Points of Interest - Public Infrastructure** Name: Sainsbury's Salford Location: 100 Regent Road, Ordsall Lane, Salford, M5 4QU Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A18SW (NW)	381	11	382524 397829
442	**Points of Interest - Public Infrastructure** Name: Sainsbury's Petrol Station Location: Sainsburys Petrol Filling Station, Regent Road, Salford, M5 4QU Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A18SW (NW)	382	11	382523 397830
443	**Points of Interest - Public Infrastructure** Name: Shell Service Station Location: Regent Road, Salford, M5 4TS Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A12NE (NW)	403	11	382338 397731
443	**Points of Interest - Public Infrastructure** Name: Shell Service Station Location: Regent Road, Salford, M5 4TS Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A12NE (NW)	403	11	382338 397731

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
443	**Points of Interest - Public Infrastructure** Name: Shell Phoenix Location: Regent Road, Salford, M5 4TS Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A12NE (NW)	403	11	382339 397732
443	**Points of Interest - Public Infrastructure** Name: Shell Phoenix Location: Regent Road, Salford, Lancashire, M5 4TS Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A12NE (NW)	403	11	382339 397732
444	**Points of Interest - Public Infrastructure** Name: Sluice Location: M3 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	475	11	383267 397492
444	**Points of Interest - Public Infrastructure** Name: Sluice Location: M3 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	479	11	383271 397493
445	**Points of Interest - Public Infrastructure** Name: Castle Field Junction Location: M3 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to an adjacent address or location	A14NW (E)	477	11	383257 397601
446	**Points of Interest - Public Infrastructure** Name: Liverpool Road Junction Location: M5 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to an adjacent address or location	A18SW (N)	486	11	382634 397986
447	**Points of Interest - Public Infrastructure** Name: Salford Petrol Station Location: 100 Regent Road, Salford, M5 4QU Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A17SE (NW)	501	11	382306 397835
448	**Points of Interest - Public Infrastructure** Name: New Look Location: 30 Chancel Avenue, Salford, M5 3SJ Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A12NE (NW)	556	11	382148 397732
448	**Points of Interest - Public Infrastructure** Name: New Look Location: 30 Chancel Avenue, Salford, M5 3SJ Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to address or location	A12NE (NW)	556	11	382148 397732
449	**Points of Interest - Public Infrastructure** Name: Cornbrook Junction Location: M16 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to an adjacent address or location	A7NE (SW)	586	11	382275 396975
450	**Points of Interest - Public Infrastructure** Name: Texaco Location: Oldfield Road, Salford, M5 4NE Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A17SE (NW)	624	11	382232 397933
450	**Points of Interest - Public Infrastructure** Name: Mfg Oldfield Road Location: Oldfield Road, Salford, M5 4NE Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A17SE (NW)	624	11	382232 397933

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
450	**Points of Interest - Public Infrastructure** Name: Texaco Ltd Location: Oldfield Road, Salford, M5 4NE Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A17SE (NW)	624	11	382233 397934
451	**Points of Interest - Public Infrastructure** Name: Deansgate Rail Station Location: Hewitt Street, M15 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A14NE (E)	645	11	383437 397506
451	**Points of Interest - Public Infrastructure** Name: Deansgate Station Location: Hewitt Street, M3 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A14NE (E)	645	11	383437 397506
452	**Points of Interest - Public Infrastructure** Name: M Travel Minibuses Ltd Location: 25 Cornbrook Park Road, Manchester, M15 4EH Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to address or location	A8SW (S)	748	11	382490 396694
453	**Points of Interest - Public Infrastructure** Name: Rooney's of Salford Coach & Minibus Hire Location: Part Warehouse 2, Duncan Street, Salford, M5 3SQ Category: Public Transport, Stations and Infrastructure Class Code: Bus and Coach Stations, Depots and Companies Positional Accuracy: Positioned to address or location	A17SE (NW)	803	11	382049 398008
454	**Points of Interest - Public Infrastructure** Name: Aleef Salford Sstn Location: 45-47 Oldfield Road, Salford, M5 4NE Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A18NW (N)	894	11	382555 398388
455	**Points of Interest - Public Infrastructure** Name: Salford Fire Station Location: Fire Station 60, Liverpool Street, Salford, M5 4LT Category: Central and Local Government Class Code: Fire Brigade Stations Positional Accuracy: Positioned to address or location	A17NE (NW)	939	11	382120 398240
455	**Points of Interest - Public Infrastructure** Name: Salford Fire Station Location: Fire Station 60, Liverpool Street, Salford, M5 4LT Category: Central and Local Government Class Code: Fire Brigade Stations Positional Accuracy: Positioned to address or location	A17NE (NW)	939	11	382119 398240
455	**Points of Interest - Public Infrastructure** Name: Salford Fire Station Location: Fire Station 60, Liverpool Street, Salford, M5 4LT Category: Central and Local Government Class Code: Fire Brigade Stations Positional Accuracy: Positioned to address or location	A17NE (NW)	939	11	382120 398240
456	**Points of Interest - Public Infrastructure** Name: Salford Central Rail Station Location: Gore Street, M3 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A19NW (N)	1000	11	383113 398465
456	**Points of Interest - Public Infrastructure** Name: Salford Central Station Location: Gore Street, M3 Category: Public Transport, Stations and Infrastructure Class Code: Railway Stations, Junctions and Halts Positional Accuracy: Positioned to address or location	A19NW (N)	1000	11	383113 398465
457	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	461	11	383066 397112

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
457	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Linby Street, M15 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A9NW (SE)	465	11	383064 397106
457	**Points of Interest - Recreational and Environmental** Name: Playground Location: York Street, M15 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	515	11	383142 397105
457	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	520	11	383149 397105
458	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8NW (S)	539	11	382650 396885
458	**Points of Interest - Recreational and Environmental** Name: Playground Location: Northdown Avenue, M15 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A8NW (S)	539	11	382647 396885
459	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A8NW (S)	626	11	382492 396819
459	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Virgil Street, M15 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A8NW (S)	630	11	382500 396812
460	**Points of Interest - Recreational and Environmental** Name: Skate Park Location: M15 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A9NW (SE)	700	11	383320 397023
461	**Points of Interest - Recreational and Environmental** Name: Play Area Location: M5 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	742	11	381932 397710
461	**Points of Interest - Recreational and Environmental** Name: Play Area Location: M5 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	745	11	381947 397754
461	**Points of Interest - Recreational and Environmental** Name: Play Area Location: M5 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A12NW (W)	753	11	381919 397706
462	**Points of Interest - Recreational and Environmental** Name: Playground Location: Rodney Street, M3 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A18NE (N)	822	11	382734 398343

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
462	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A18NE (N)	823	11	382735 398344
463	**Points of Interest - Recreational and Environmental** Name: Playground Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A11SE (W)	997	11	381639 397311

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
464	**Nitrate Vulnerable Zones** Name: Irwell / Man. Ship Canal (Kearsley To Irlam Locks) Nvz Description: Surface Water Source: Environment Agency, Head Office	A18NW (N)	798	6	382600 398300

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Environment Agency - Head Office	June 2020	Annually
Salford City Council - Environmental Health Department	November 2013	Annual Rolling Update
Trafford Metropolitan Borough Council - Renewal and Environmental Protection	November 2013	Annual Rolling Update
Bury Metropolitan Borough Council - Environmental Health Department	October 2013	Annual Rolling Update
Tameside Metropolitan Borough Council - Environmental Health Department	October 2017	Annual Rolling Update
Manchester City Council - Environmental Health Department	September 2014	Annual Rolling Update
Discharge Consents		
Environment Agency - North West Region	October 2020	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - North West Region	March 2013	Annual Rolling Update
Integrated Pollution Controls		
Environment Agency - North West Region	October 2008	Variable
Integrated Pollution Prevention And Control		
Environment Agency - North West Region	October 2020	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Bury Metropolitan Borough Council - Environmental Health Department	February 2015	Variable
Tameside Metropolitan Borough Council - Environmental Health Department	June 2015	Variable
Salford City Council - Environmental Health Department	March 2015	Variable
Trafford Metropolitan Borough Council - Environmental Health Department	October 2014	Variable
Manchester City Council - Environmental Health Department	September 2014	Variable
Local Authority Pollution Prevention and Controls		
Bury Metropolitan Borough Council - Environmental Health Department	February 2015	Not Applicable
Trafford Metropolitan Borough Council - Environmental Health Department	July 2015	Annual Rolling Update
Tameside Metropolitan Borough Council - Environmental Health Department	June 2015	Annual Rolling Update
Salford City Council - Environmental Health Department	March 2015	Annual Rolling Update
Manchester City Council - Environmental Health Department	September 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Bury Metropolitan Borough Council - Environmental Health Department	February 2015	Variable
Tameside Metropolitan Borough Council - Environmental Health Department	June 2015	Variable
Salford City Council - Environmental Health Department	March 2015	Variable
Trafford Metropolitan Borough Council - Environmental Health Department	October 2014	Variable
Manchester City Council - Environmental Health Department	September 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	October 2020	
Pollution Incidents to Controlled Waters		
Environment Agency - North West Region	January 2000	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - North West Region	March 2013	Annual Rolling Update
Prosecutions Relating to Controlled Waters		
Environment Agency - North West Region	March 2013	Annual Rolling Update
Registered Radioactive Substances		
Environment Agency - North West Region	June 2016	
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Biology Sampling Points		
Environment Agency - Head Office	July 2012	Annually
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency - North West Region - South Area	October 2020	Quarterly

Agency & Hydrological	Version	Update Cycle
Water Abstractions Environment Agency - North West Region	January 2021	Quarterly
Water Industry Act Referrals Environment Agency - North West Region	October 2017	Quarterly
Groundwater Vulnerability Map Environment Agency - Head Office	June 2018	As notified
Bedrock Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Superficial Aquifer Designations Environment Agency - Head Office	January 2018	Annually
Source Protection Zones Environment Agency - Head Office	October 2019	Quarterly
Extreme Flooding from Rivers or Sea without Defences Environment Agency - Head Office	September 2020	Quarterly
Flooding from Rivers or Sea without Defences Environment Agency - Head Office	September 2020	Quarterly
Areas Benefiting from Flood Defences Environment Agency - Head Office	September 2020	Quarterly
Flood Water Storage Areas Environment Agency - Head Office	September 2020	Quarterly
Flood Defences Environment Agency - Head Office	September 2020	Quarterly
OS Water Network Lines Ordnance Survey	September 2020	Quarterly
Surface Water 1 in 30 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water 1 in 100 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water 1 in 1000 year Flood Extent Environment Agency - Head Office	October 2013	Annually
Surface Water Suitability Environment Agency - Head Office	October 2013	Annually
BGS Groundwater Flooding Susceptibility British Geological Survey - National Geoscience Information Service	May 2013	Annually

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Environment Agency - Head Office	October 2019	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - North West Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency - North West Region - South Area	October 2020	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency - North West Region - South Area	October 2020	Quarterly
Local Authority Landfill Coverage		
Bury Metropolitan Borough Council	May 2000	Not Applicable
Manchester City Council - Planning Department	May 2000	Not Applicable
Salford City Council - Environmental Health Department	May 2000	Not Applicable
Tameside Metropolitan Borough Council	May 2000	Not Applicable
Trafford Metropolitan Borough Council - Environmental Health Department	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Bury Metropolitan Borough Council	May 2000	Not Applicable
Manchester City Council - Planning Department	May 2000	Not Applicable
Salford City Council - Environmental Health Department	May 2000	Not Applicable
Tameside Metropolitan Borough Council	May 2000	Not Applicable
Trafford Metropolitan Borough Council - Environmental Health Department	May 2000	Not Applicable
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites		
Environment Agency - North West Region - South Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency - North West Region - South Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency - North West Region - South Area	March 2003	Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Trafford Metropolitan Borough Council	April 2016	Variable
Bury Metropolitan Borough Council	February 2016	Variable
Manchester City Council - Planning Department	February 2016	Variable
Tameside Metropolitan Borough Council - Planning and Building Control	February 2016	Variable
Salford City Council	June 2016	Variable
Planning Hazardous Substance Consents		
Trafford Metropolitan Borough Council	April 2016	Variable
Bury Metropolitan Borough Council	February 2016	Variable
Manchester City Council - Planning Department	February 2016	Variable
Tameside Metropolitan Borough Council - Planning and Building Control	February 2016	Variable
Salford City Council	June 2016	Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	Annually
BGS Recorded Mineral Sites British Geological Survey - National Geoscience Information Service	November 2020	Bi-Annually
BGS Urban Soil Chemistry British Geological Survey - National Geoscience Information Service	October 2015	Annually
BGS Urban Soil Chemistry Averages British Geological Survey - National Geoscience Information Service	October 2015	Annually
CBSCB Compensation District Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	April 2020	Annually
Potential for Compressible Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards British Geological Survey - National Geoscience Information Service	January 2019	Annually
Radon Potential - Radon Affected Areas British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures British Geological Survey - National Geoscience Information Service	July 2011	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	October 2020	Quarterly
Fuel Station Entries Catalist Ltd - Experian	September 2020	Quarterly
Gas Pipelines National Grid	January 2021	
Points of Interest - Commercial Services PointX	December 2020	Quarterly
Points of Interest - Education and Health PointX	December 2020	Quarterly
Points of Interest - Manufacturing and Production PointX	December 2020	Quarterly
Points of Interest - Public Infrastructure PointX	December 2020	Quarterly
Points of Interest - Recreational and Environmental PointX	December 2020	Quarterly
Underground Electrical Cables National Grid	August 2020	

Sensitive Land Use	Version	Update Cycle
Ancient Woodland		
Natural England	April 2020	Bi-Annually
Areas of Adopted Green Belt		
Bury Metropolitan Borough Council	June 2020	As notified
Manchester City Council	June 2020	As notified
Salford City Council	June 2020	As notified
Tameside Metropolitan Borough Council	June 2020	As notified
Trafford Metropolitan Borough Council	June 2020	As notified
Areas of Unadopted Green Belt		
Bury Metropolitan Borough Council	June 2020	As notified
Manchester City Council	June 2020	As notified
Salford City Council	June 2020	As notified
Tameside Metropolitan Borough Council	June 2020	As notified
Trafford Metropolitan Borough Council	June 2020	As notified
Areas of Outstanding Natural Beauty		
Natural England	January 2021	Bi-Annually
Environmentally Sensitive Areas		
Natural England	January 2017	
Forest Parks		
Forestry Commission	April 1997	Not Applicable
Local Nature Reserves		
Natural England	April 2020	Bi-Annually
Marine Nature Reserves		
Natural England	July 2019	Bi-Annually
National Nature Reserves		
Natural England	January 2021	Bi-Annually
National Parks		
Natural England	April 2017	Bi-Annually
Nitrate Sensitive Areas		
Natural England	April 2016	Not Applicable
Nitrate Vulnerable Zones		
Environment Agency - Head Office	December 2017	Bi-Annually
Department for Environment, Food and Rural Affairs (DEFRA - formerly FRCA)	October 2015	
Ramsar Sites		
Natural England	August 2020	Bi-Annually
Sites of Special Scientific Interest		
Natural England	May 2020	Bi-Annually
Special Areas of Conservation		
Natural England	July 2020	Bi-Annually
Special Protection Areas		
Natural England	September 2020	Bi-Annually

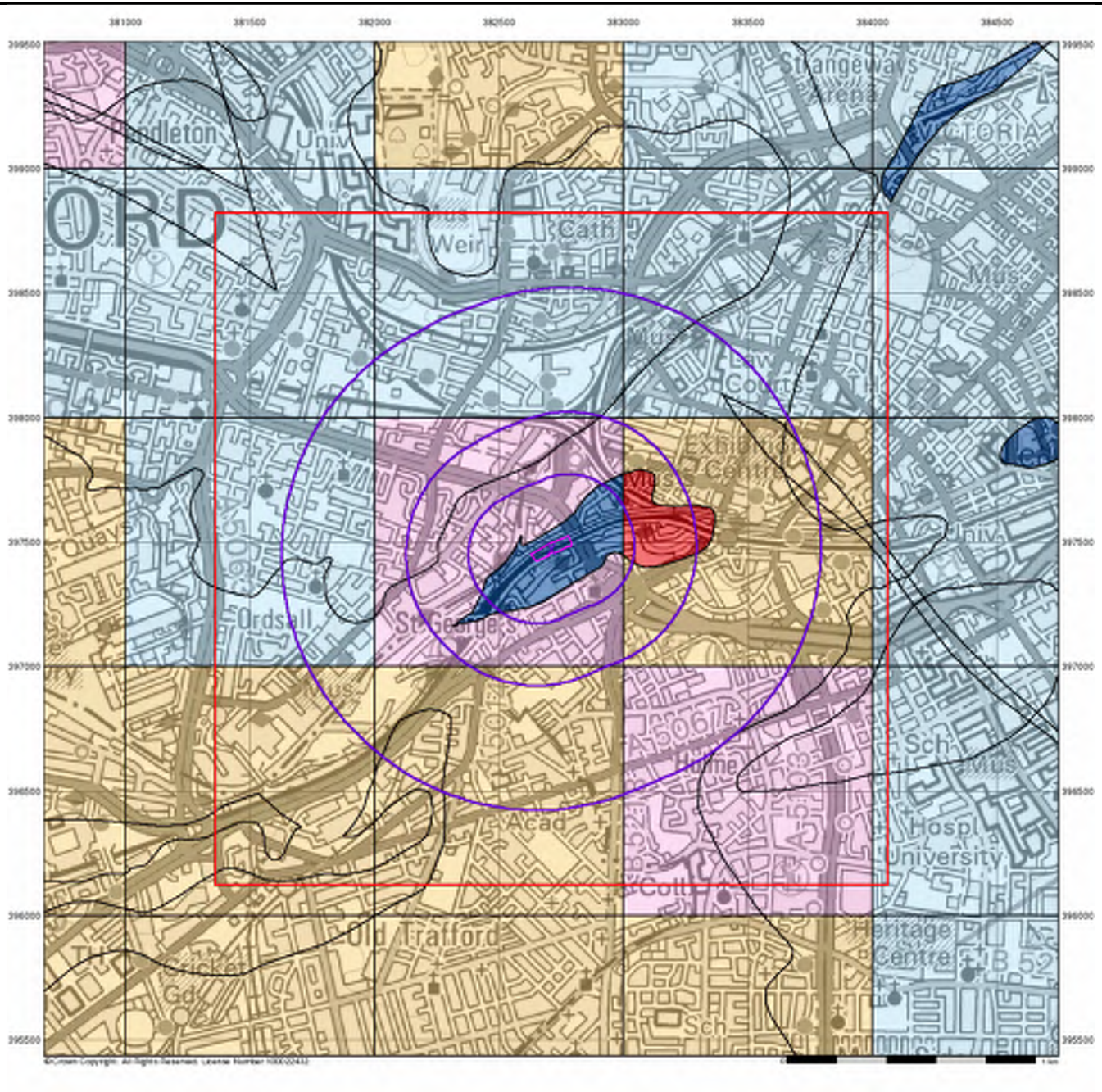
Data Suppliers

A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Stantec UK Ltd	

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
3	**Manchester City Council - Environmental Health Department** PO Box 463, Town Hall Extension, Albert Square, Manchester, Greater Manchester, M60 3NY	Telephone: 0161 234 4884 / 234 4873. Fax: 0161 234 4508 Website: www.manchester.gov.uk
4	**Salford City Council - Environmental Health Department** Crompton House, 100 Chorley Road, Swinton, Manchester, Greater Manchester, M27 2ES	Telephone: 0161 7370551 Fax: 0161 728 1956 Website: www.salford.gov.uk
5	**Trafford Metropolitan Borough Council - Environmental Health Department** P O Box 14, Trafford Town Hall, Talbot Road, Stretford, Greater Manchester, M32 0YJ	Telephone: 0161 912 4566 Fax: 0161 873 7783 Website: www.trafford.gov.uk
6	**Environment Agency - Head Office** Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS32 4UD	Telephone: 01454 624400 Fax: 01454 624409
7	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
8	**Manchester City Council - Planning Department** Town Hall, Manchester, Greater Manchester, M60 2LA	Telephone: 0161 234 5000 Fax: 0161 234 4508 Website: www.manchester.gov.uk
9	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
10	**Stantec UK Ltd** Caversham Bridge House, Waterman Place, Reading, RG1 8DN	Telephone: 0118 950 0761 Email: pba.reading@stantec.com Website: www.stantec.com
11	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.



Groundwater Vulnerability

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

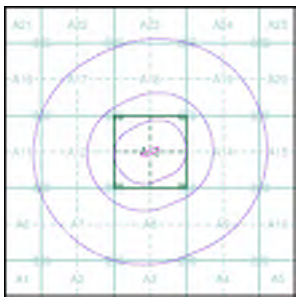
Agency and Hydrological

Bedrock Aquifers	Superficial Aquifers
High Vulnerability, Principal Aquifer	High Vulnerability, Principal Aquifer
High Vulnerability, Secondary Aquifer	High Vulnerability, Secondary Aquifer
Medium Vulnerability, Principal Aquifer	Medium Vulnerability, Principal Aquifer
Medium Vulnerability, Secondary Aquifer	Medium Vulnerability, Secondary Aquifer
Low Vulnerability, Principal Aquifer	Low Vulnerability, Principal Aquifer
Low Vulnerability, Secondary Aquifer	Low Vulnerability, Secondary Aquifer

Unproductive Aquifer

Soluble Rock

Site Sensitivity Context Map - Slice A



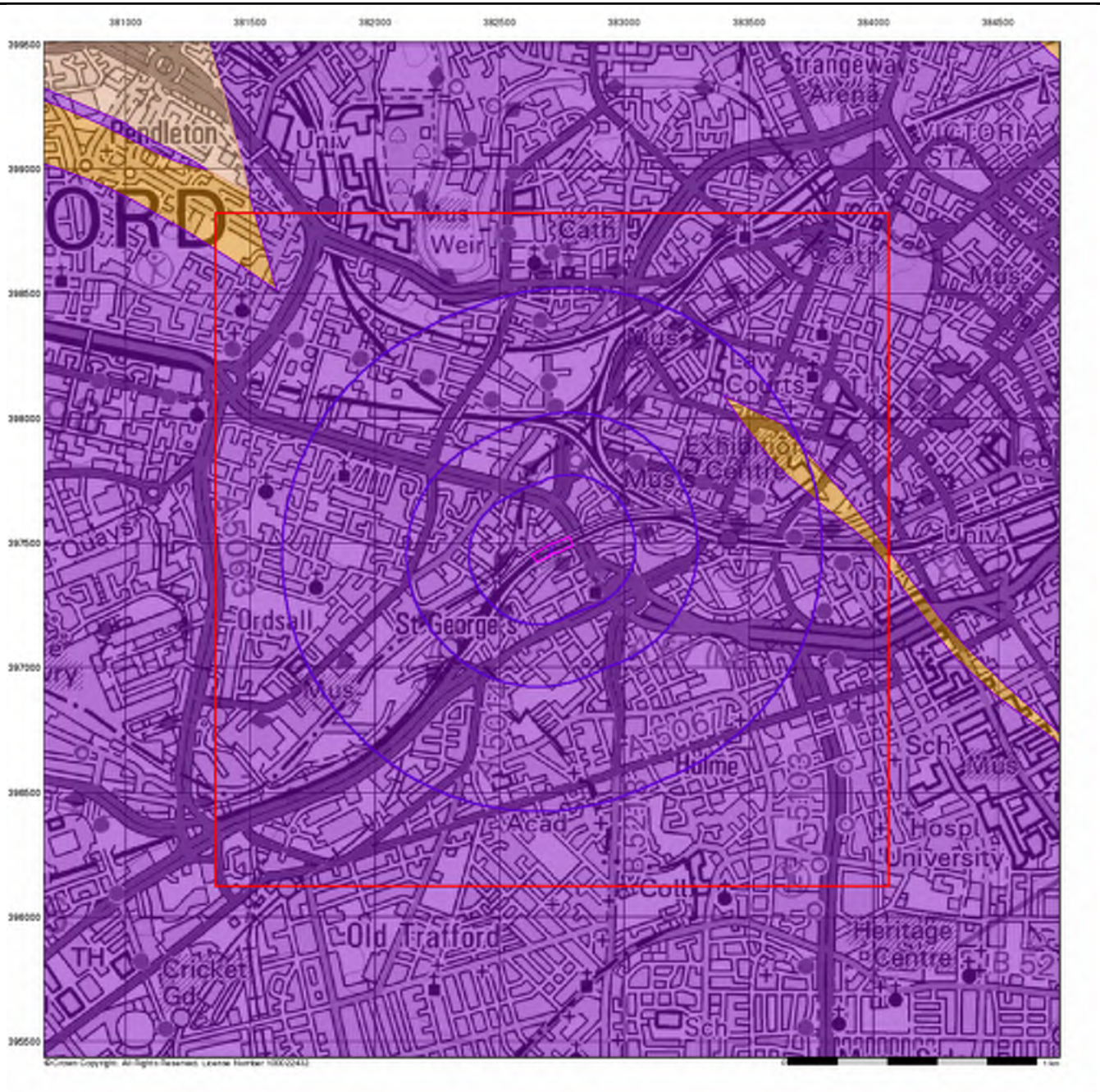
Order Details

Order Number:	272481752_1_1
Customer Ref:	077442
National Grid Reference:	382710, 397470
Slice:	A
Site Area (Ha):	0.64
Search Buffer (m):	1000

Site Details

Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU

Landmark INFORMATION GROUP
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Web: www.envirocheck.co.uk



Bedrock Aquifer Designation

General

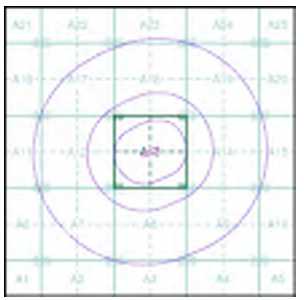
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A



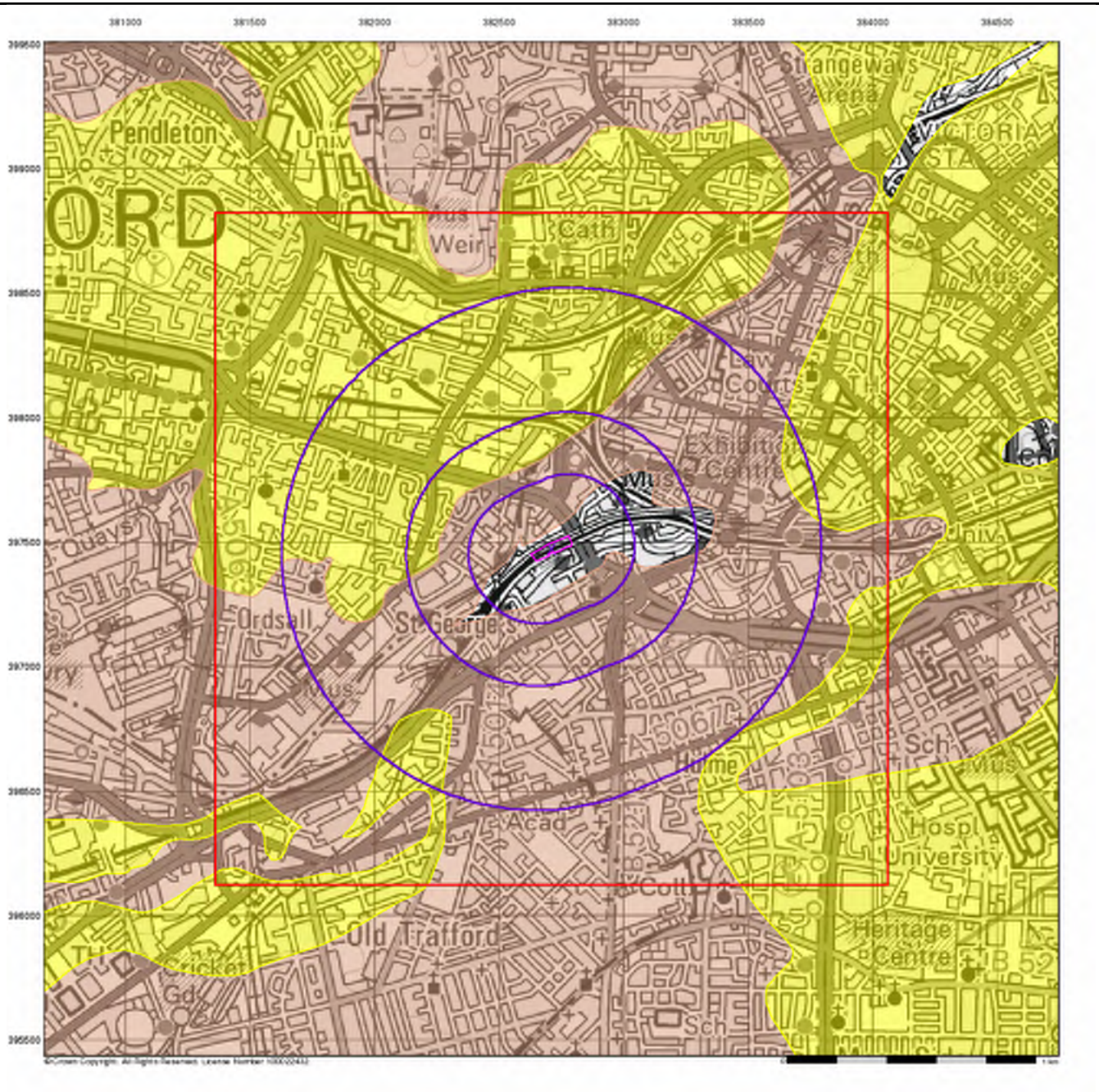
Order Details

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Slice:	A
Site Area (Ha):	0.64
Search Buffer (m):	1000

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Landmark INFORMATION GROUP
Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



Superficial Aquifer Designation

General

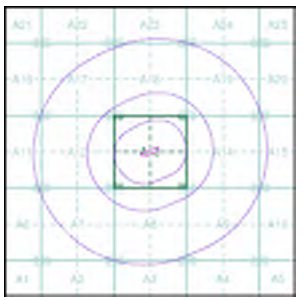
Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

Agency and Hydrological

Geological Classes

- Principal Aquifer
- Secondary A Aquifer
- Secondary B Aquifer
- Secondary Undifferentiated
- Unproductive Strata
- Unknown
- Unknown (Lakes and Landslip)

Site Sensitivity Context Map - Slice A

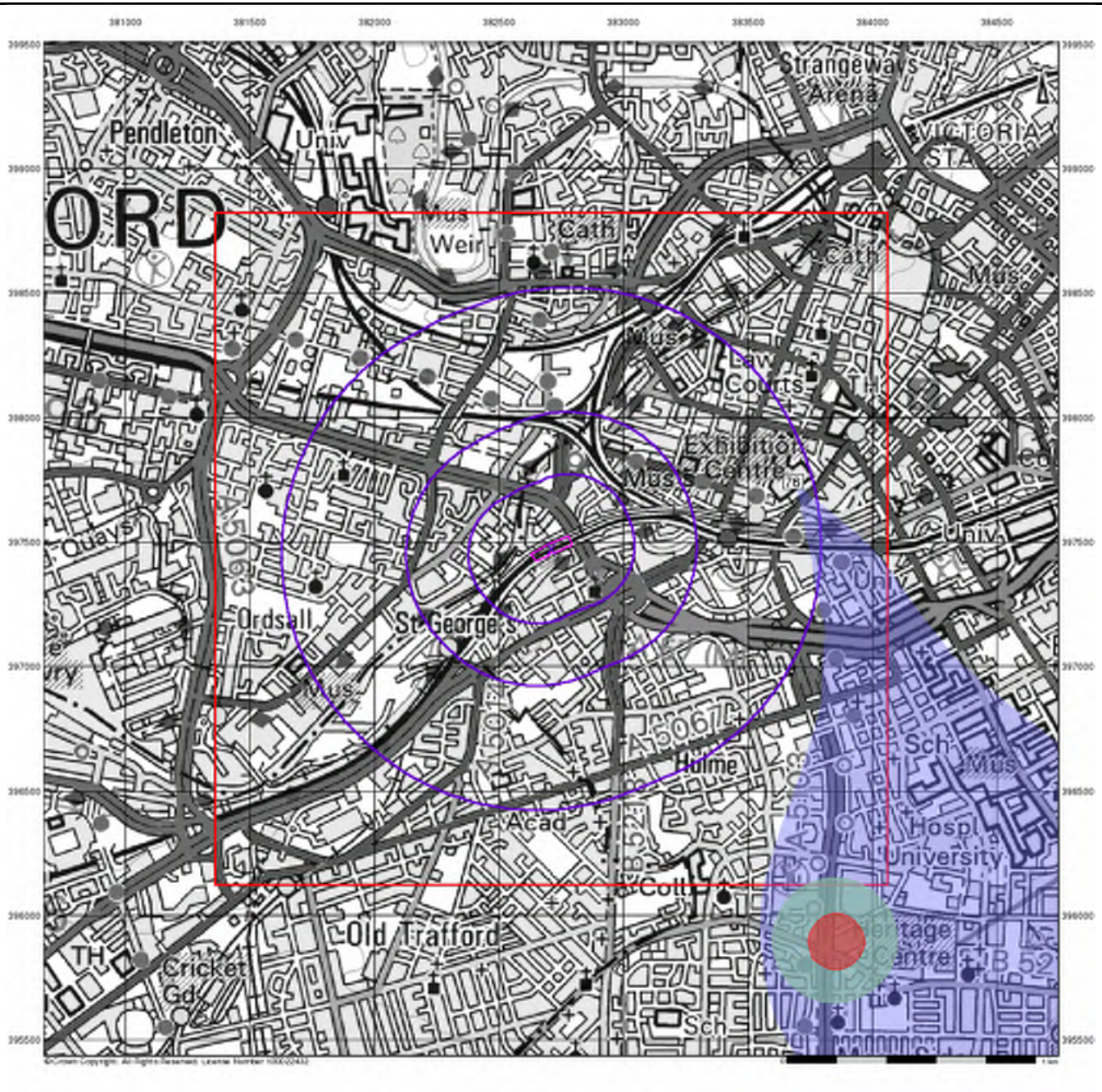


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Customer Ref:	077442
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Search Buffer (m):	1000

Site Details

Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU



Source Protection Zones

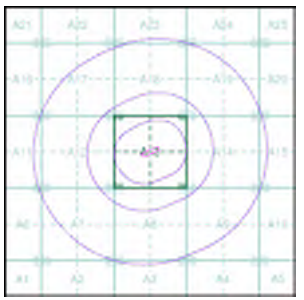
General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice A

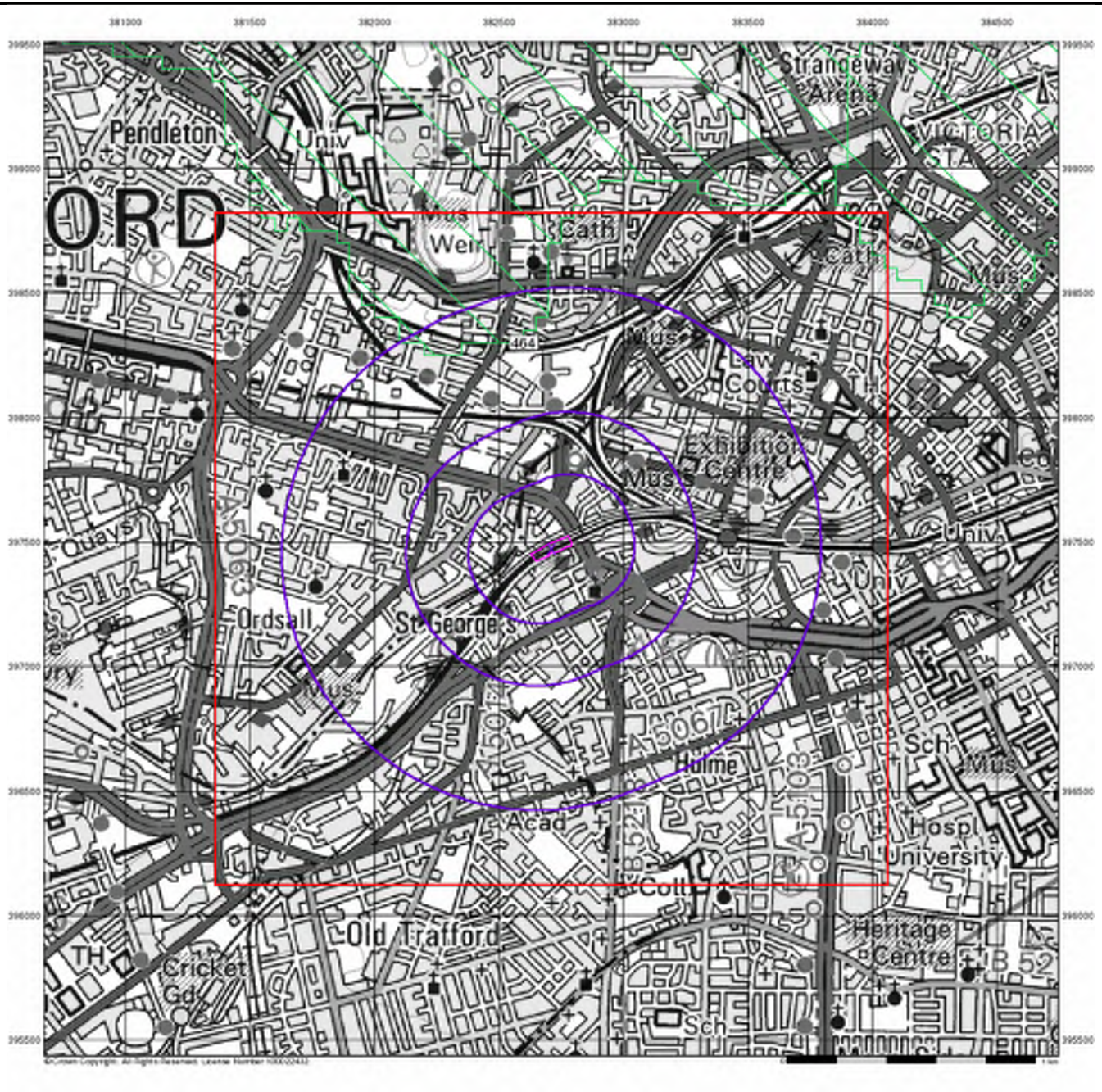


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Site Area (Ha):	0.64
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Site Details

Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU



Sensitive Land Uses

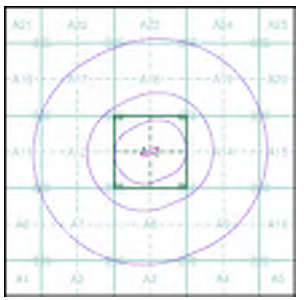
General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice A

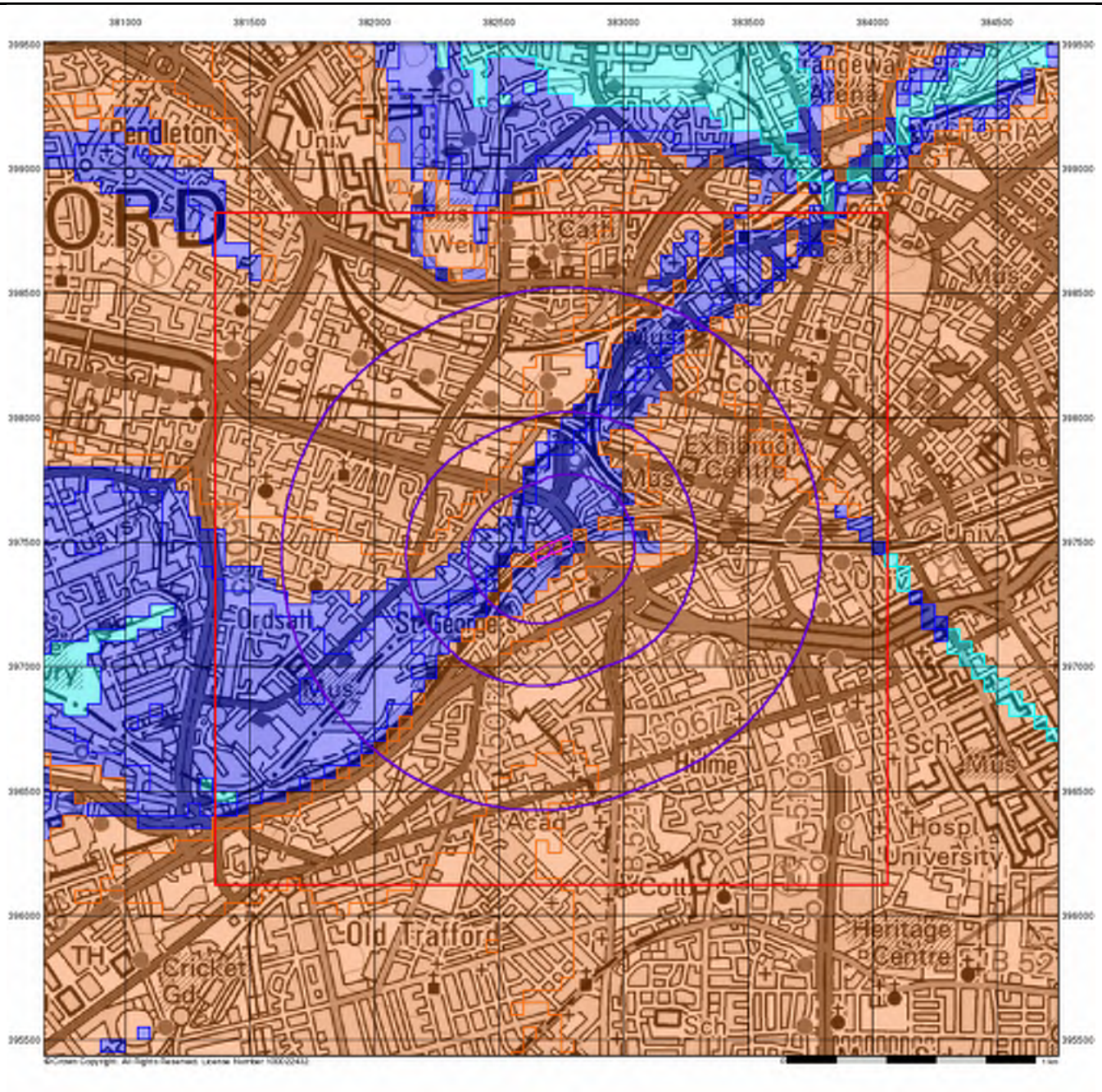


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Site Details

Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU



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BGS Flood GFS Data

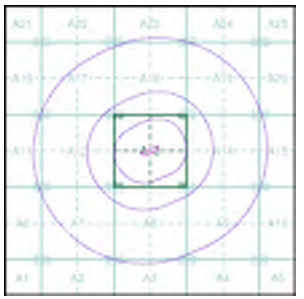
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



Order Details

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Site Details

Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU

Geology 1:50,000 Maps Legends

Artificial Ground and Landslip

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	MGR	Made Ground (Undivided)	Artificial Deposit	Not Supplied - Holocene
	WGR	Worked Ground (Undivided)	Void	Not Supplied - Holocene
	WMGR	Infilled Ground	Artificial Deposit	Not Supplied - Holocene

Superficial Geology

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	ALV	Alluvium	Clay, Silt, Sand and Gravel	Not Supplied - Holocene
	TILLD	Till, Devensian	Diamicton	Not Supplied - Devensian
	GFSDD	Glaciofluvial Sheet Deposits, Devensian	Sand and Gravel	Not Supplied - Devensian
	GFDUD	Glaciofluvial Deposits, Devensian	Sand and Gravel	Not Supplied - Devensian
	RTD1	River Terrace Deposits, 1	Sand and Gravel	Not Supplied - Quaternary

Bedrock and Faults

Map Colour	Lex Code	Rock Name	Rock Type	Min and Max Age
	CHES	Chester Formation	Sandstone	Not Supplied - Olenekian
	WLSF	Wilmslow Sandstone Formation	Sandstone	Not Supplied - Early Triassic
	MM	Manchester Marls Formation	Mudstone	Not Supplied - GUADALUPIAN
	CS	Collyhurst Sandstone Formation	Sandstone	Not Supplied - Cisuralian
	HA	Halesowen Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	PUCM	Pennine Upper Coal Measures Formation	Mudstone, Siltstone and Sandstone	Not Supplied - Westphalian
	ETM	Etruria Formation	Sandstone and Mudstone	Not Supplied - Westphalian
		Faults		

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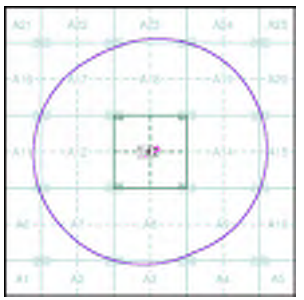
Geology 1:50,000 Maps

This report contains geological map extracts taken from the BGS Digital Geological map of Great Britain at 1:50,000 scale and is designed for users carrying out preliminary site assessments who require geological maps for the area around the site. This mapping may be more up to date than previously published paper maps.
The various geological layers - artificial and landslip deposits, superficial geology and solid (bedrock) geology are displayed in separate maps, but superimposed on the final 'Combined Surface Geology' map. All map legends feature on this page. Not all layers have complete nationwide coverage, so availability of data for relevant map sheets is indicated below.

Geology 1:50,000 Maps Coverage

Map ID: 1
Map Sheet No: 085
Map Name: Manchester
Map Date: 2010
Bedrock Geology: Available
Superficial Geology: Not Available
Artificial Geology: Not Available
Faults: Not Supplied
Landslip: Not Available
Rock Segments: Not Supplied

Geology 1:50,000 Maps - Slice A

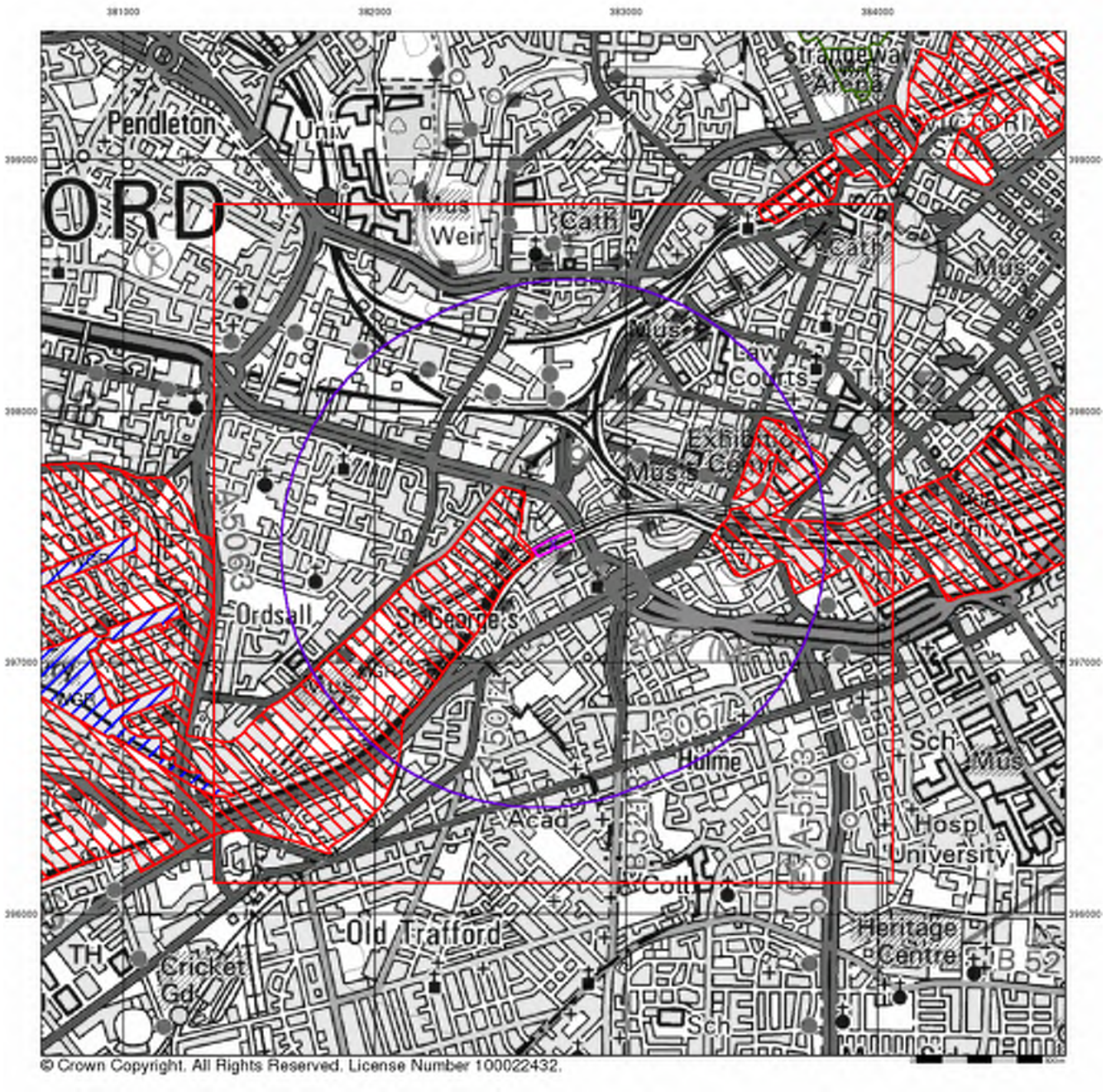


Order Details:

Order Number: 272481752_1_1
Customer Reference: 077442
National Grid Reference: 382710, 397470
Slice: A
Site Area (Ha): 0.64
Search Buffer (m): 1000

Site Details:

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Artificial Ground and Landslip

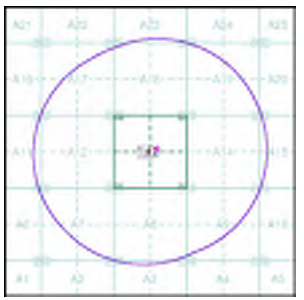
Artificial ground is a term used by BGS for those areas where the ground surface has been significantly modified by human activity. Information about previously developed ground is especially important, as it is often associated with potentially contaminated material, unpredictable engineering conditions and unstable ground.

Artificial ground includes:

- Made ground - man-made deposits such as embankments and spoil heaps on the natural ground surface.
- Worked ground - areas where the ground has been cut away such as quarries and road cuttings.
- Infilled ground - areas where the ground has been cut away then wholly or partially backfilled.
- Landscaped ground - areas where the surface has been reshaped.
- Disturbed ground - areas of ill-defined shallow or near surface mineral workings where it is impracticable to map made and worked ground separately.

Mass movement (landslip) deposits on BGS geological maps are primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground. The dataset also includes foundered strata, where the ground has collapsed due to subsidence.

Artificial Ground and Landslip Map - Slice A



Order Details:

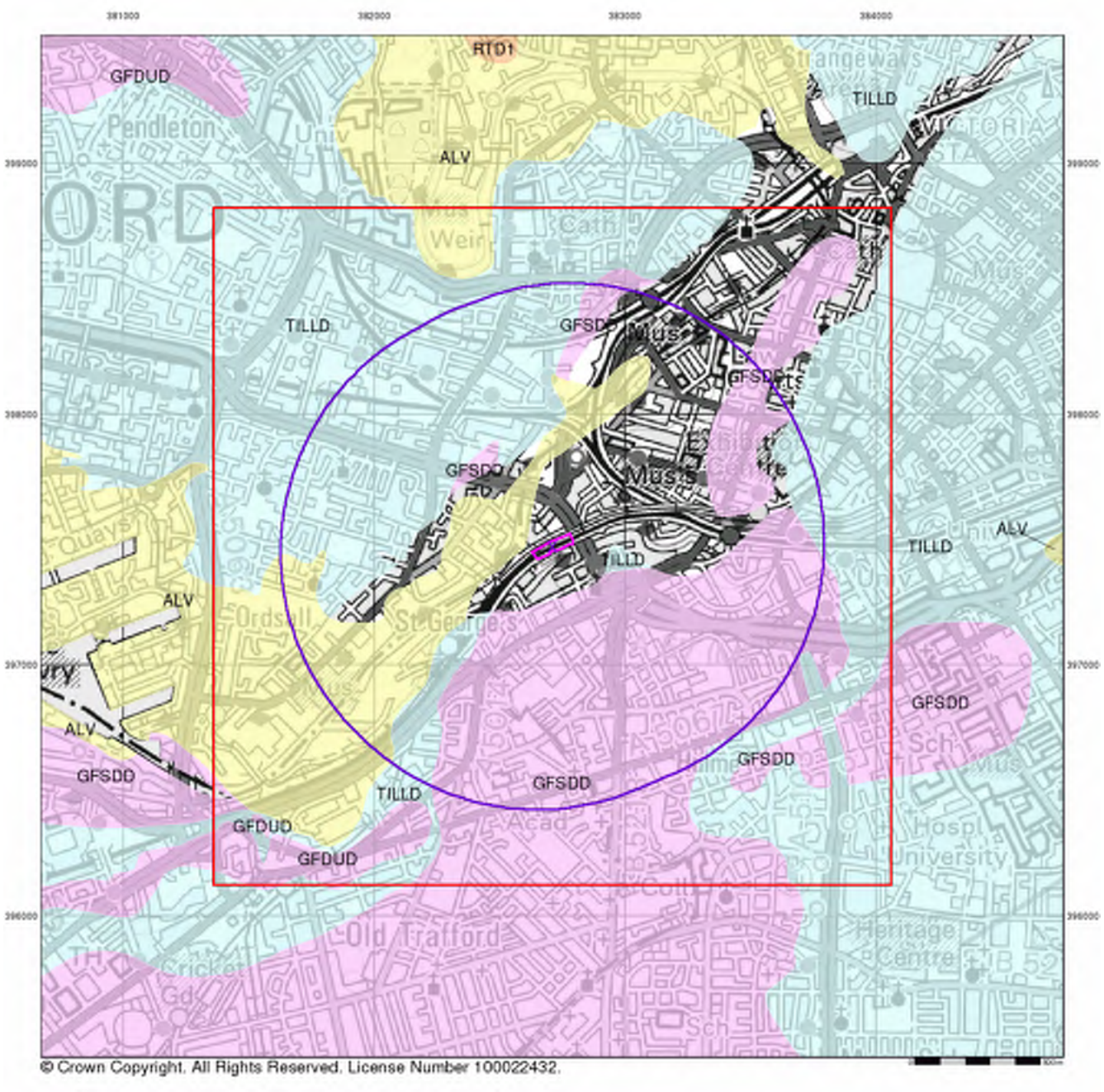
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Customer Reference:	077442
National Grid Reference:	382710, 397470
Slice:	A
Site Area (Ha):	0.64
Search Buffer (m):	1000

Site Details:

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Landmark INFORMATION GROUP

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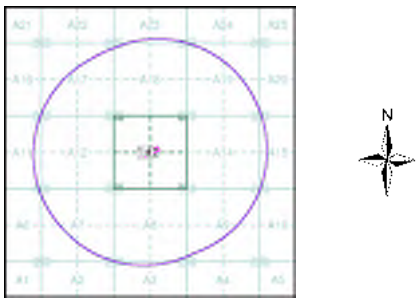
Superficial Geology

Superficial Deposits are the youngest geological deposits formed during the most recent period of geological time, the Quaternary, which extends back about 1.8 million years from the present.

They rest on older deposits or rocks referred to as Bedrock. This dataset contains Superficial deposits that are of natural origin and 'in place'. Other superficial strata may be held in the Mass Movement dataset where they have been moved, or in the Artificial Ground dataset where they are of man-made origin.

Most of these Superficial deposits are unconsolidated sediments such as gravel, sand, silt and clay, and onshore they form relatively thin, often discontinuous patches or larger spreads.

Superficial Geology Map - Slice A



Order Details:

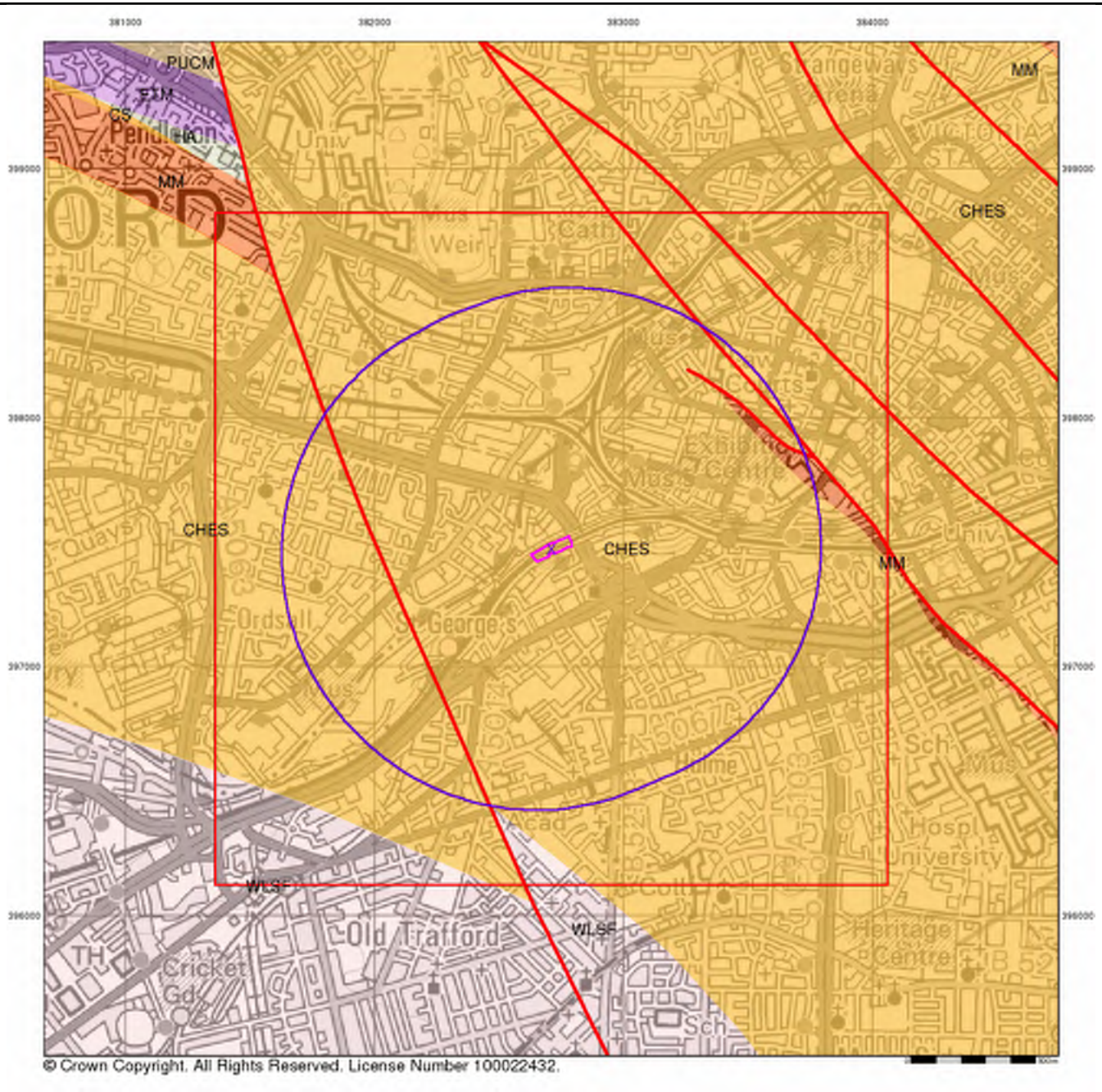
Order Number:	272481752_1_1
Customer Reference:	077442
National Grid Reference:	382710, 397470
Slice:	A
Site Area (Ha):	0.64
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Landmark INFORMATION GROUP

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Bedrock and Faults

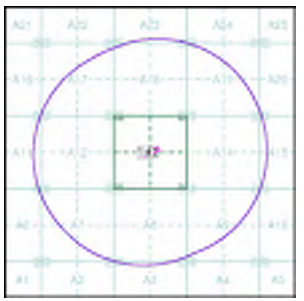
Bedrock geology is a term used for the main mass of rocks forming the Earth and are present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

The bedrock has formed over vast lengths of geological time ranging from ancient and highly altered rocks of the Proterozoic, some 2500 million years ago, or older, up to the relatively young Pliocene, 1.8 million years ago.

The bedrock geology includes many lithologies, often classified into three types based on origin: igneous, metamorphic and sedimentary.

The BGS Faults and Rock Segments dataset includes geological faults (e.g. normal, thrust), and thin beds mapped as lines (e.g. coal seam, gypsum bed). Some of these are linked to other particular 1:50,000 Geology datasets, for example, coal seams are part of the bedrock sequence, most faults and mineral veins primarily affect the bedrock but cut across the strata and post date its deposition.

Bedrock and Faults Map - Slice A



Order Details:

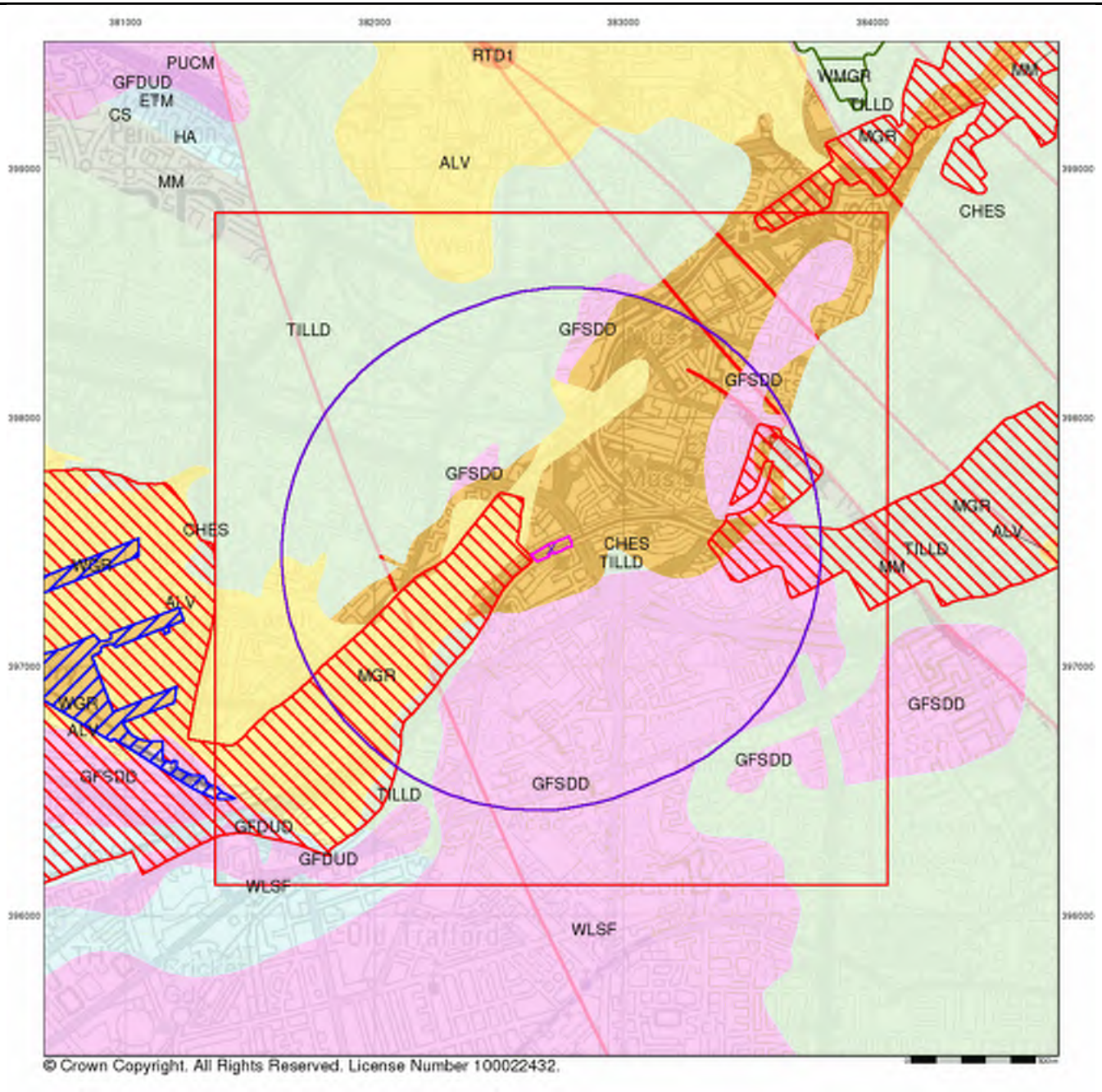
Order Number:	272481752_1_1
Customer Reference:	077442
National Grid Reference:	382710, 397470
Slice:	A
Site Area (Ha):	0.64
Search Buffer (m):	1000

Site Details:

Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU

Landmark INFORMATION GROUP

Tel: 0844 844 9952
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Web: www.envirocheck.co.uk



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Combined Surface Geology

The Combined Surface Geology map combines all the previous maps into one combined geological overview of your site.

Please consult the legends to the previous maps to interpret the Combined "Surface Geology" map.

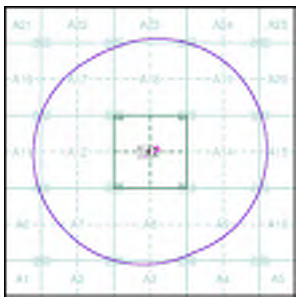
Additional Information

More information on 1:50,000 Geological mapping and explanations of rock classifications can be found on the BGS website. Using the LEX Codes in this report, further descriptions of rock types can be obtained by interrogating the 'BGS Lexicon of Named Rock Units'. This database can be accessed by following the 'Information and Data' link on the BGS website.

Contact

British Geological Survey
Kingsley Dunham Centre
Keyworth
Nottingham
NG12 5GG
Telephone: 0115 936 3143
Fax: 0115 936 3276
email: enquiries@bgs.ac.uk
website: www.bgs.ac.uk

Combined Geology Map - Slice A

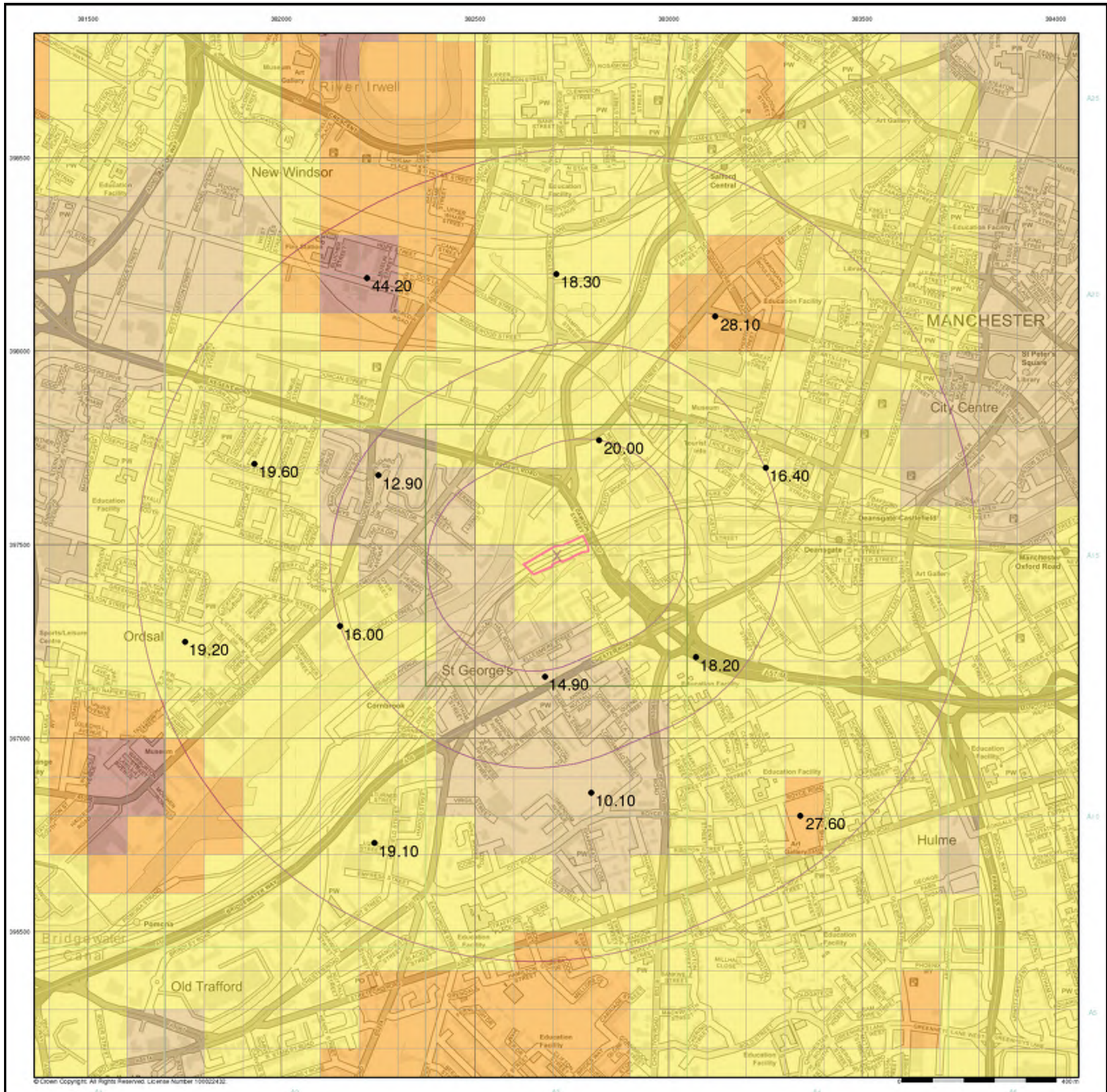


Order Details:

Order Number:	272481752_1_1
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Slice:	A
Site Area (Ha):	0.64
Search Buffer (m):	1000

Site Details:

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General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

Urban Soil Chemistry Arsenic

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Urban Soil Chemistry Arsenic - Slice A



Order Details

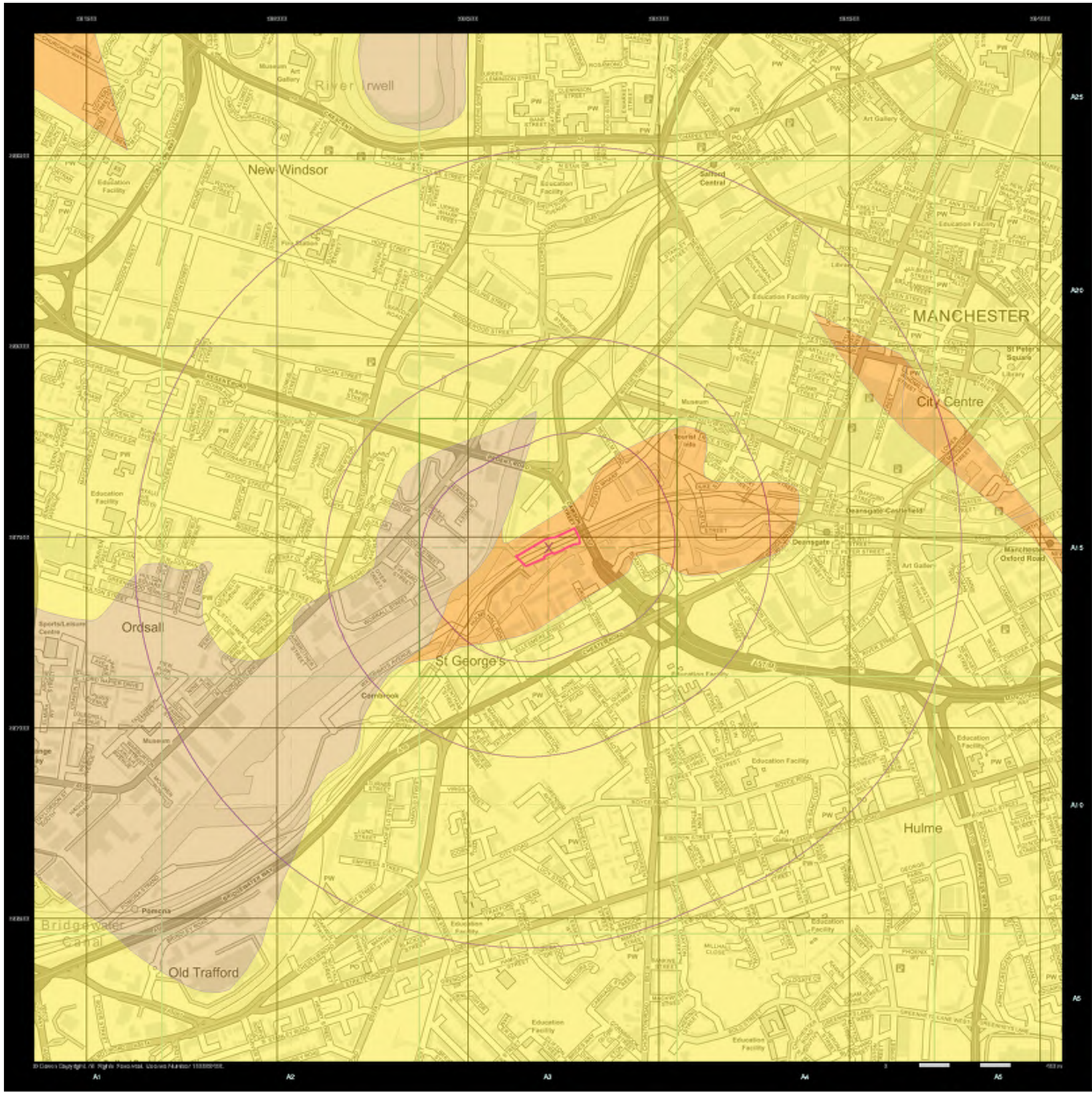
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General

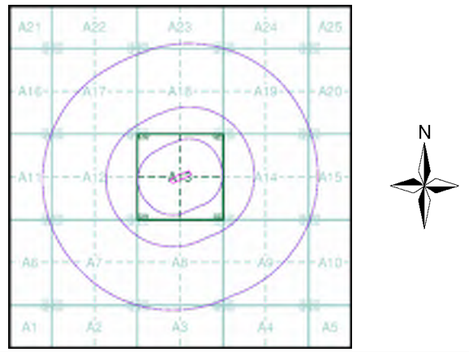
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Estimated Soil Chemistry Arsenic - Slice A

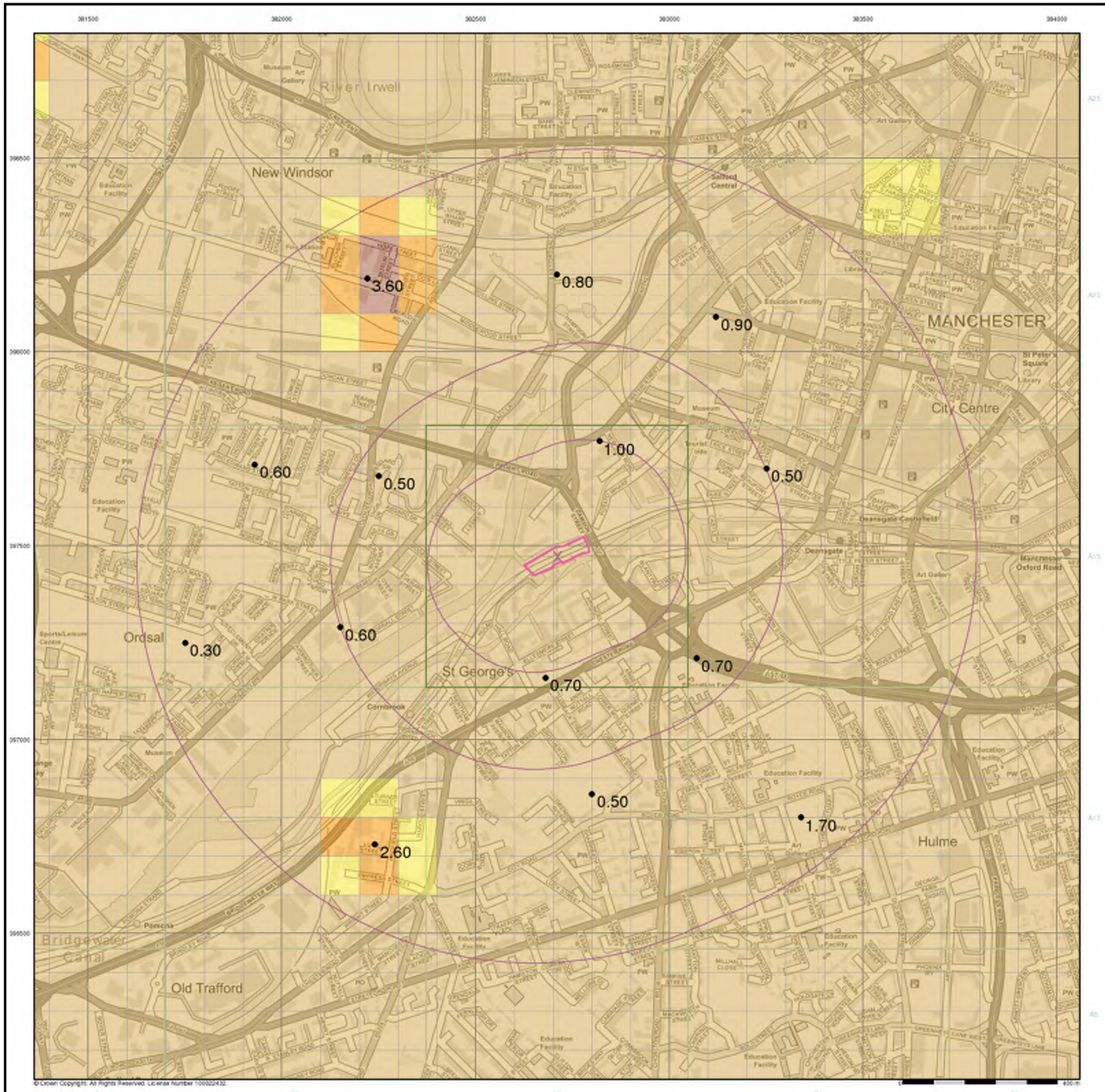


Order Details

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Slice:	A
Site Area (Ha):	0.64
Search buffer (m):	1000

Site Details

Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU



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General

Specified Site | Specified Buffer(s) | Bearing Reference Point

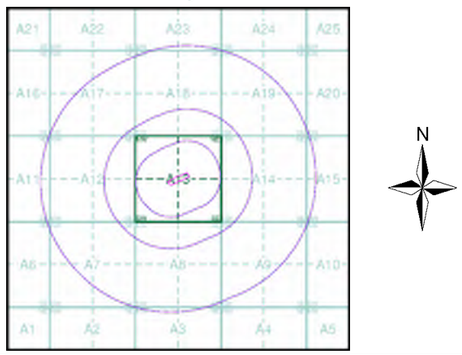
Urban Soil Chemistry Cadmium

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Cadmium Concentrations mg/kg

- < 1.8
- 1.8 - 2.2
- 2.2 - 3.0
- > 3.0

Urban Soil Chemistry Cadmium - Slice A

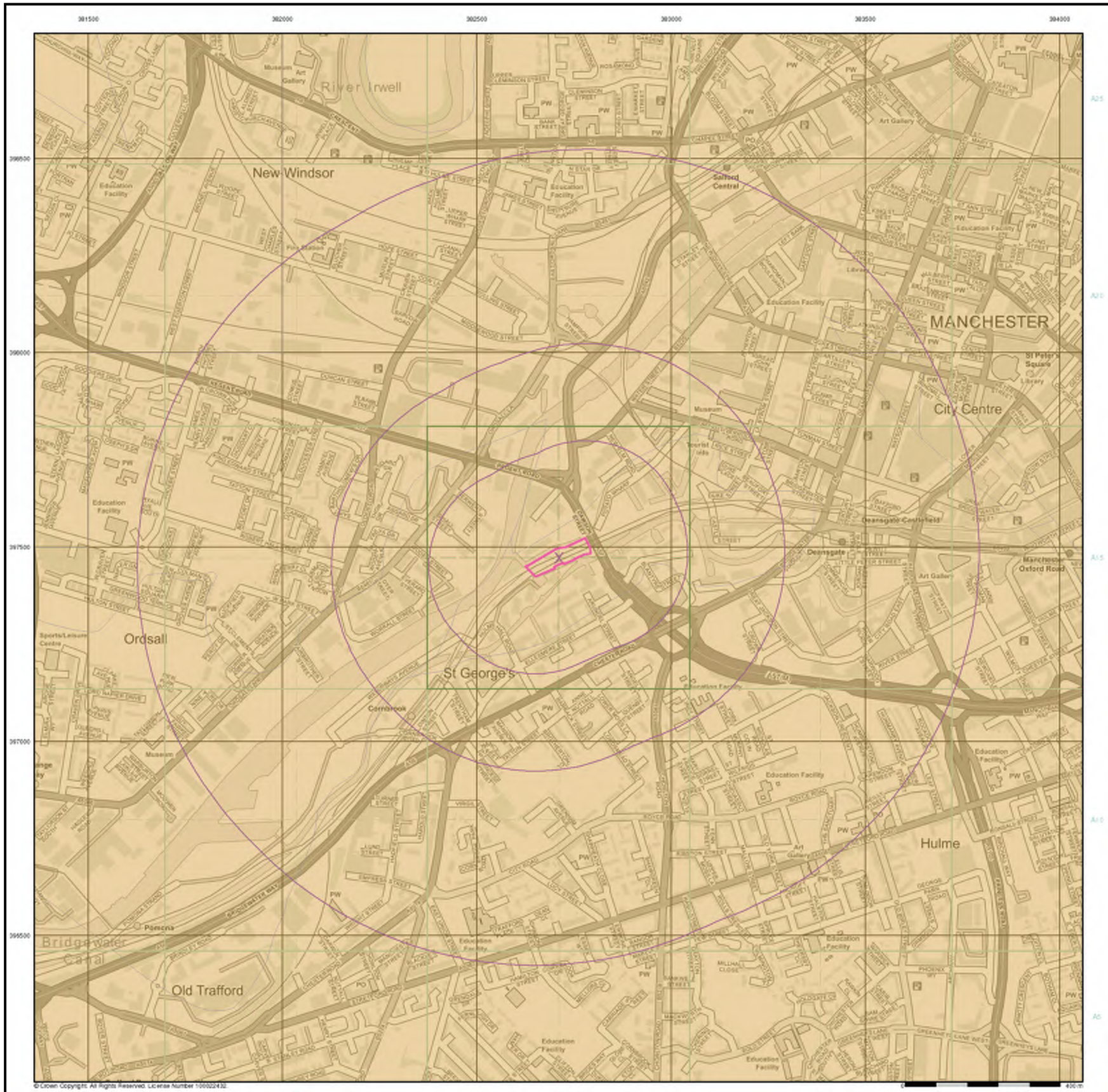


Order Details

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Site Details

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General

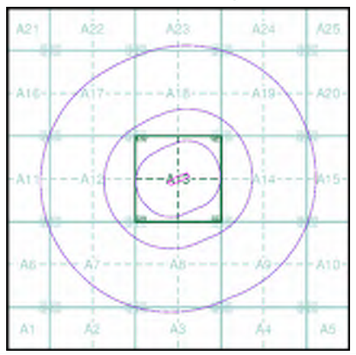
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

	< 1.8
	1.8 - 2.2
	2.2 - 3.0
	> 3.0

Estimated Soil Chemistry Cadmium - Slice A

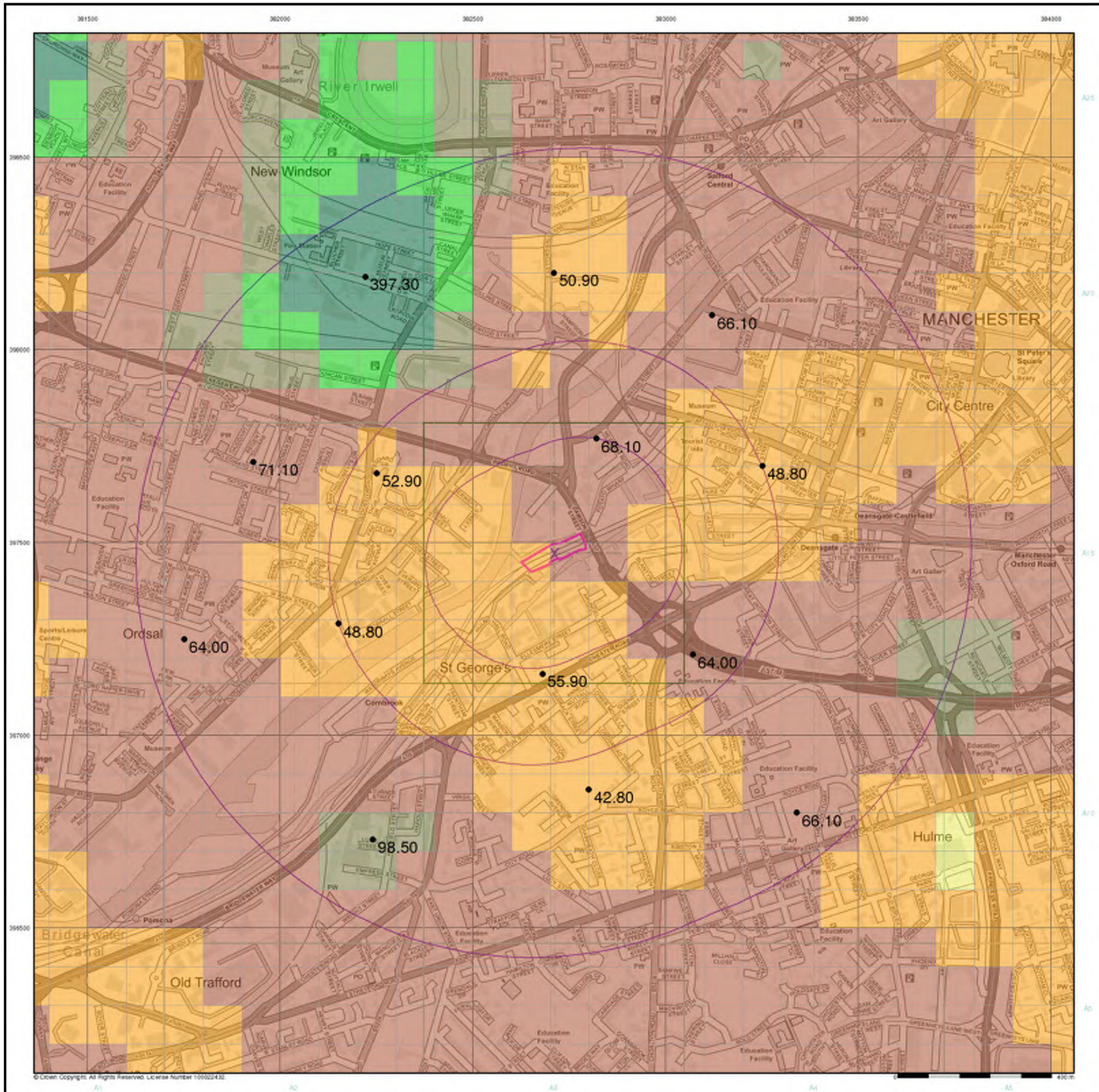


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Site Details

Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU



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General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

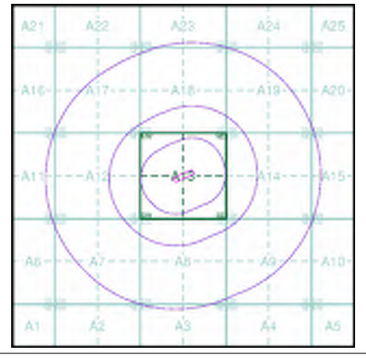
Urban Soil Chemistry Chromium

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Urban Soil Chemistry Chromium - Slice A



Order Details

Order Details:	272481752_1_1
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Slice:	A
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Search buffer (m):	1000

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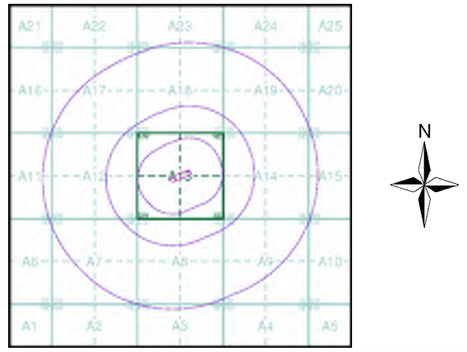
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Estimated Soil Chemistry Chromium - Slice A



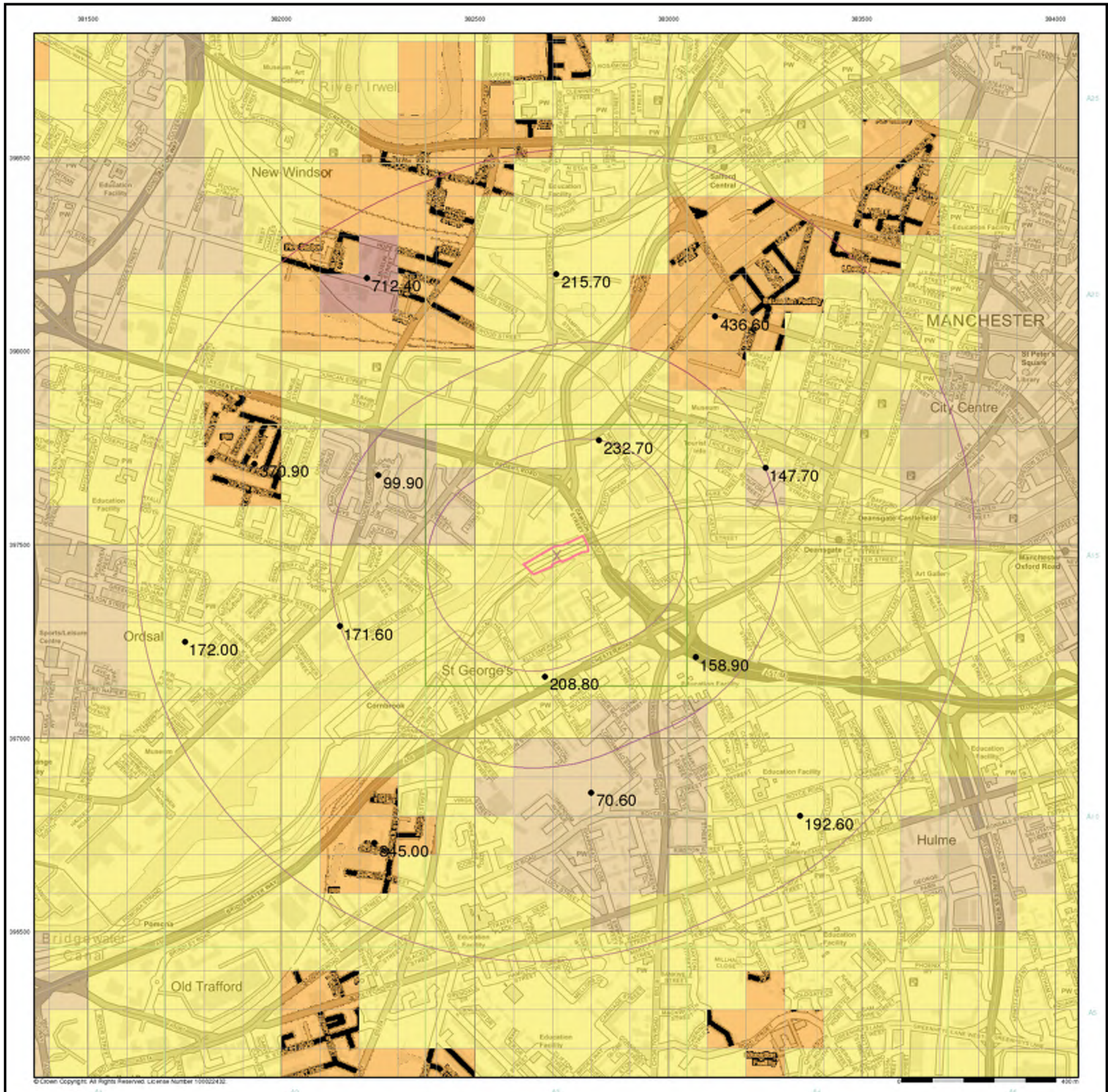
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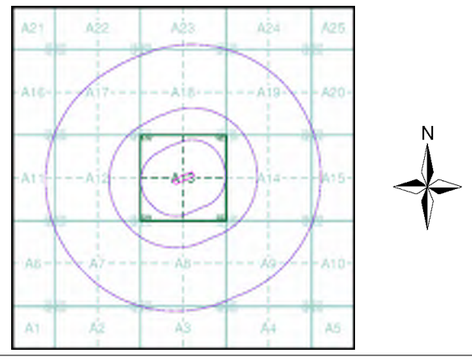
Urban Soil Chemistry Lead

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Lead Concentrations mg/kg

- < 150
- 150 - 300
- 300 - 600
- 600 - 900
- > 900

Urban Soil Chemistry Lead - Slice A



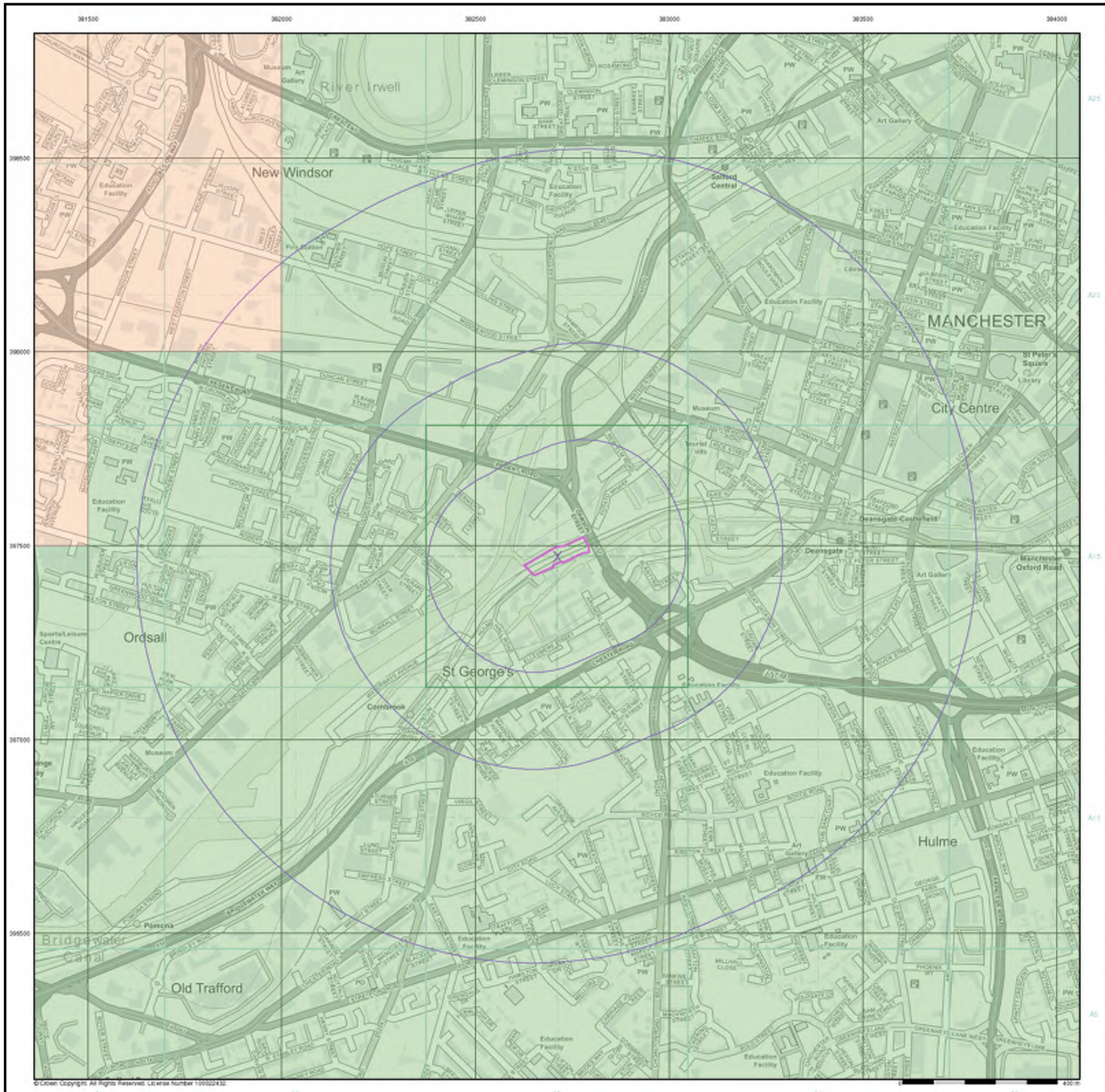
Order Details

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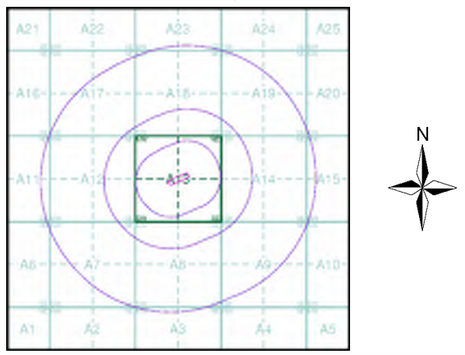
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- <100 mg/kg
- 100 - 200
- 200 - 300
- 300 - 600
- 600 - 1200
- >1200

Estimated Soil Chemistry Lead - Slice A

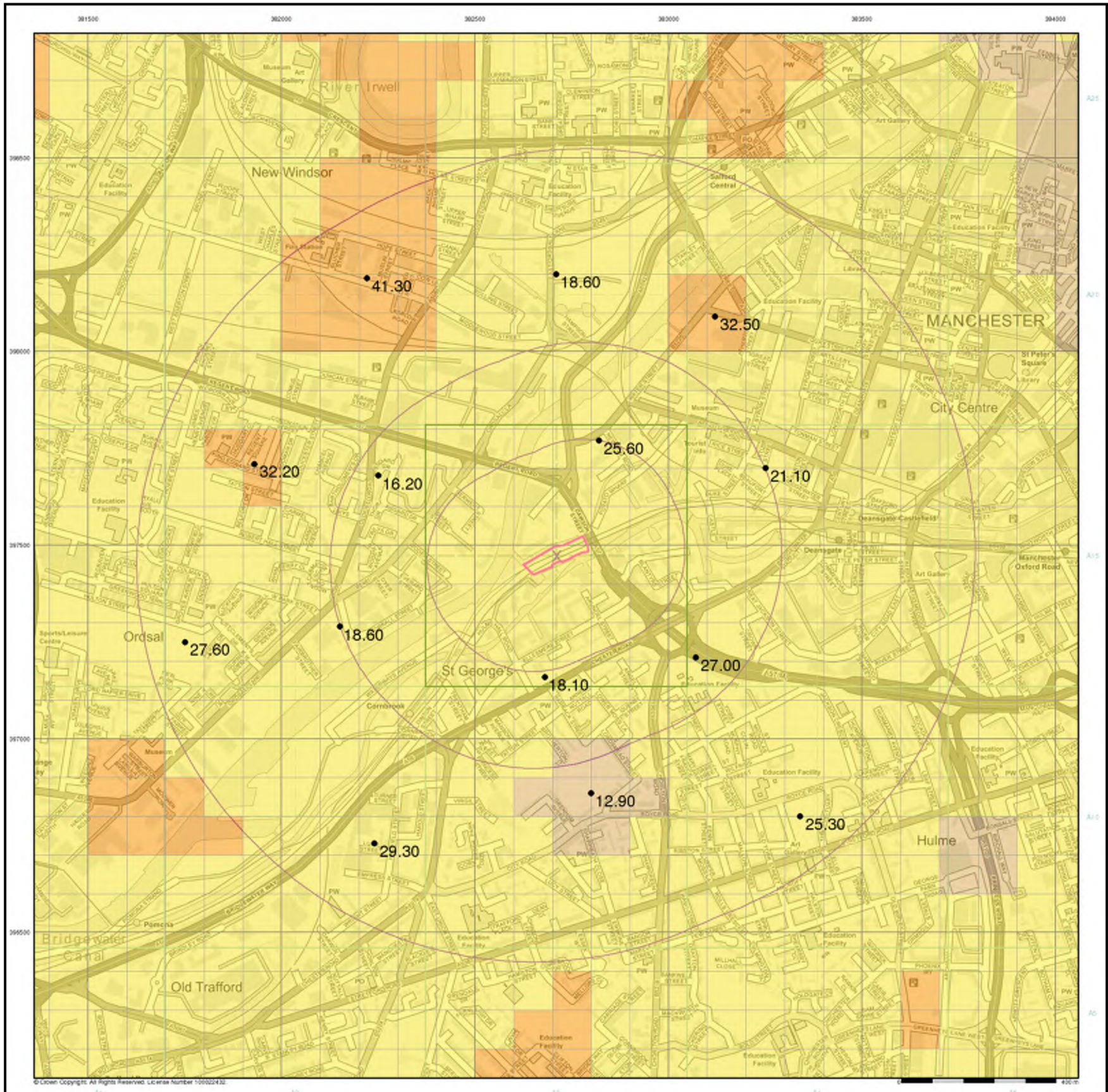


Order Details

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Site Details

Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU



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General

Specified Site | Specified Buffer(s) | X Bearing Reference Point

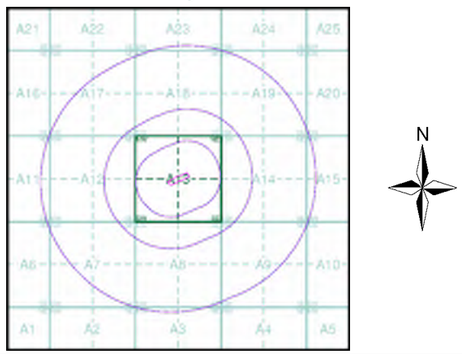
Urban Soil Chemistry Nickel

● BGS Urban Soil Chemistry Measured Concentration Values (mg/kg)

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Urban Soil Chemistry Nickel - Slice A

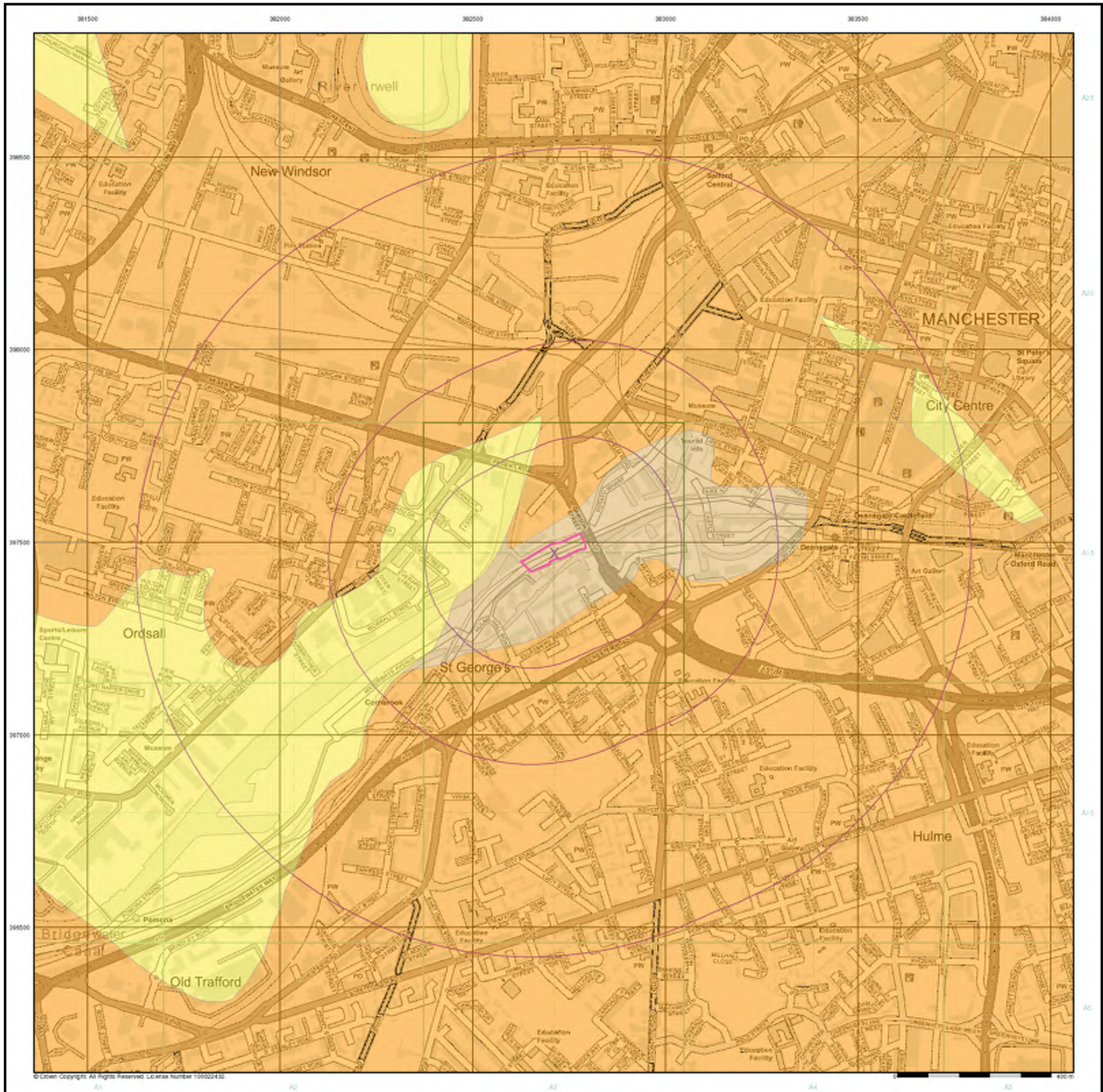


Order Details

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Slice:	A
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Search buffer (m):	1000

Site Details

Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU



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General

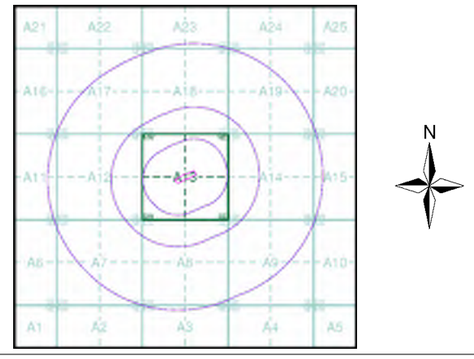
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Estimated Soil Chemistry Nickel - Slice A



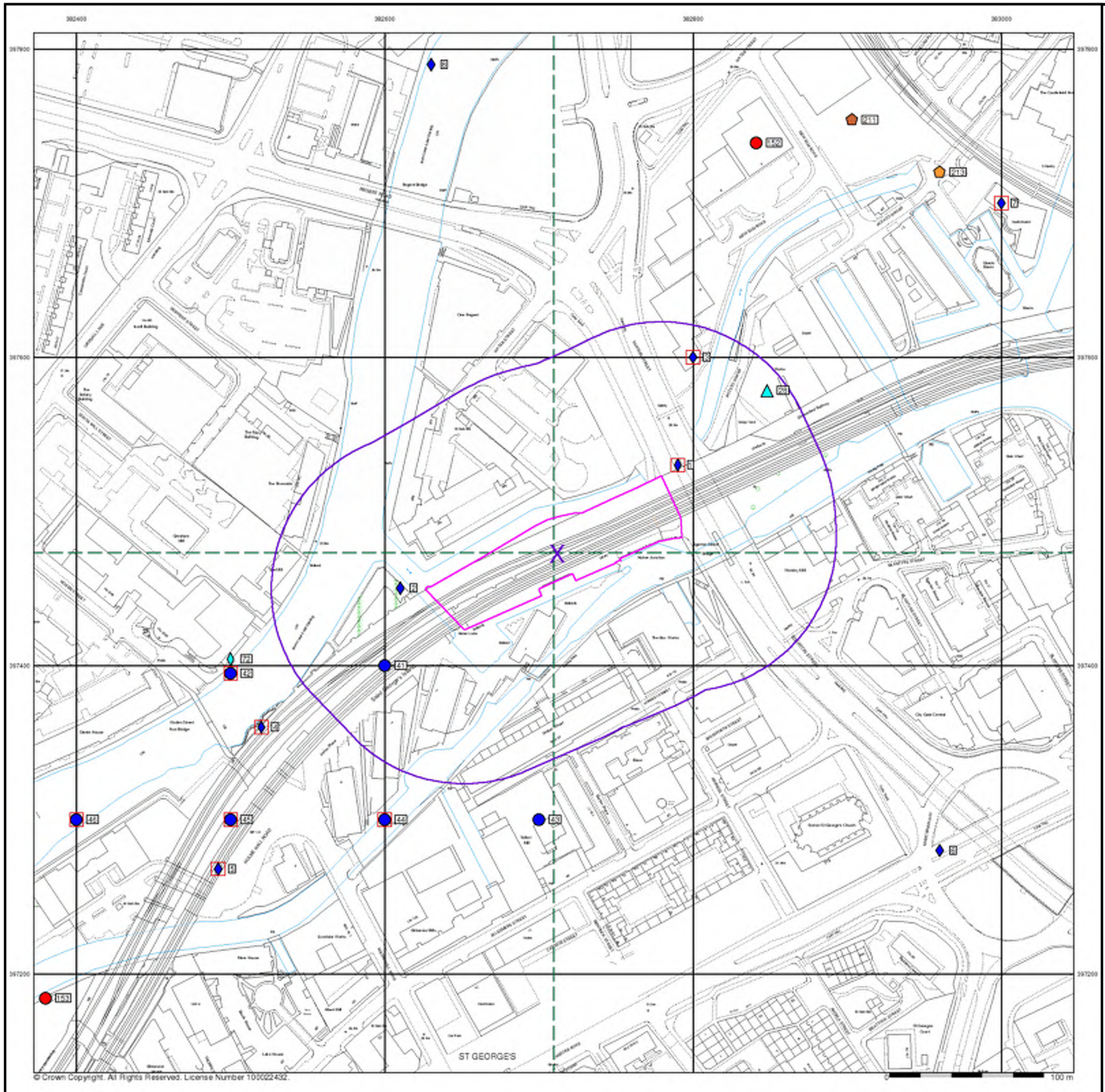
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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location
- Pylon
- Overhead Transmission Line

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

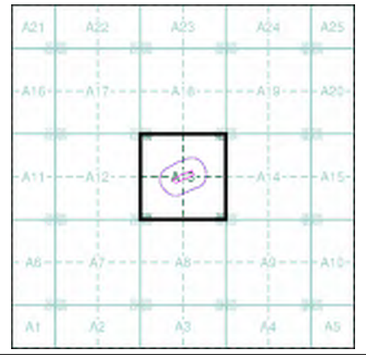
Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Segment A13



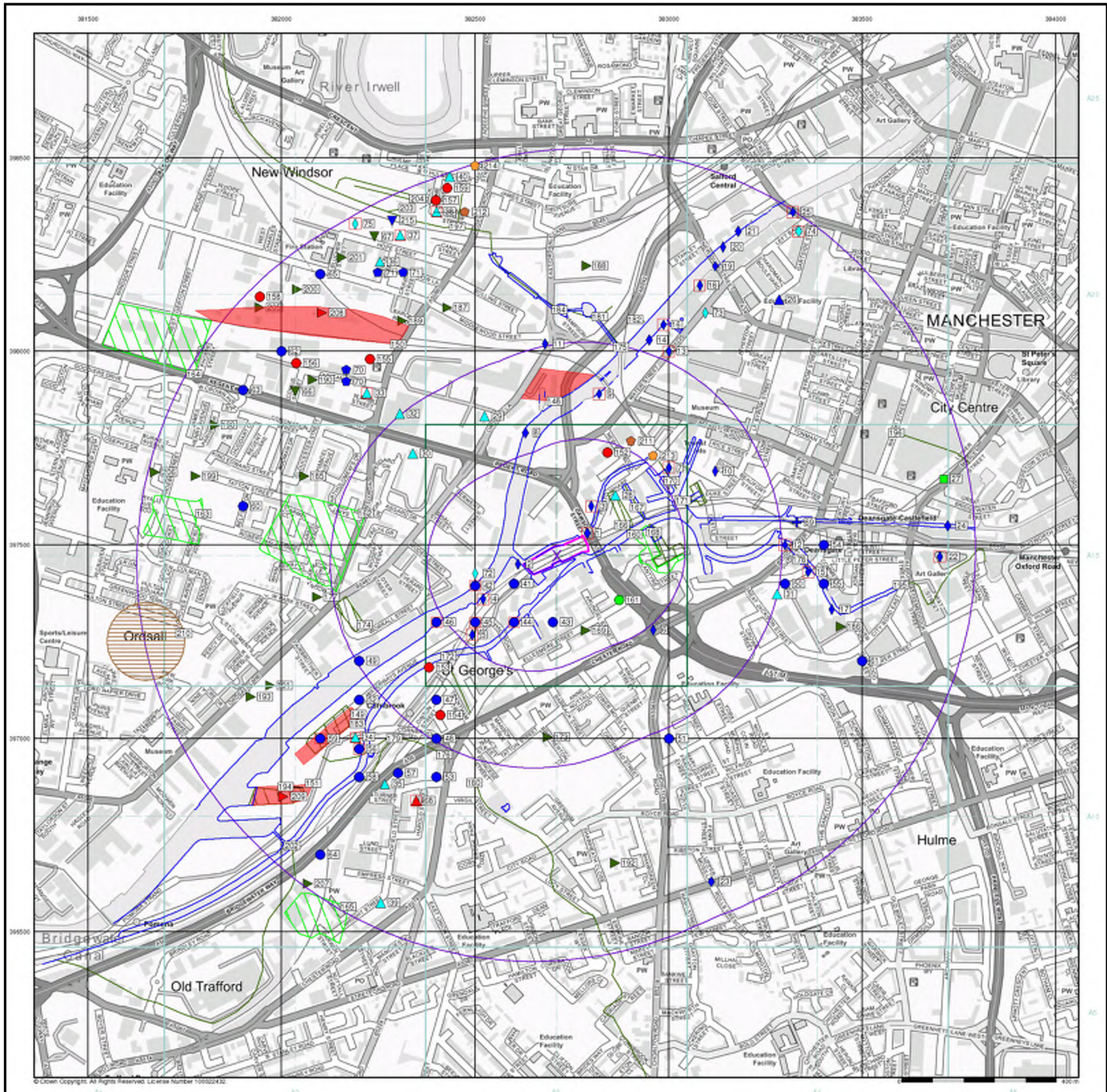
Order Details

Order Number:	272481752_1_1
Customer Ref:	077442
National Grid Reference:	382710, 397470
Slice:	A
Site Area (Ha):	0.64
Plot Buffer (m):	100

Site Details

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

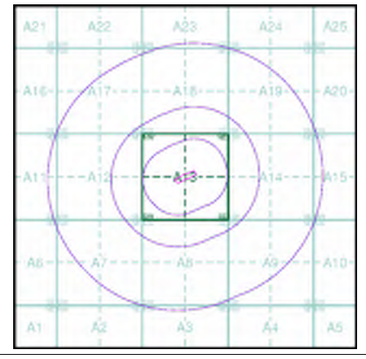
Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
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- Local Authority Recorded Landfill Site
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- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice A



Order Details

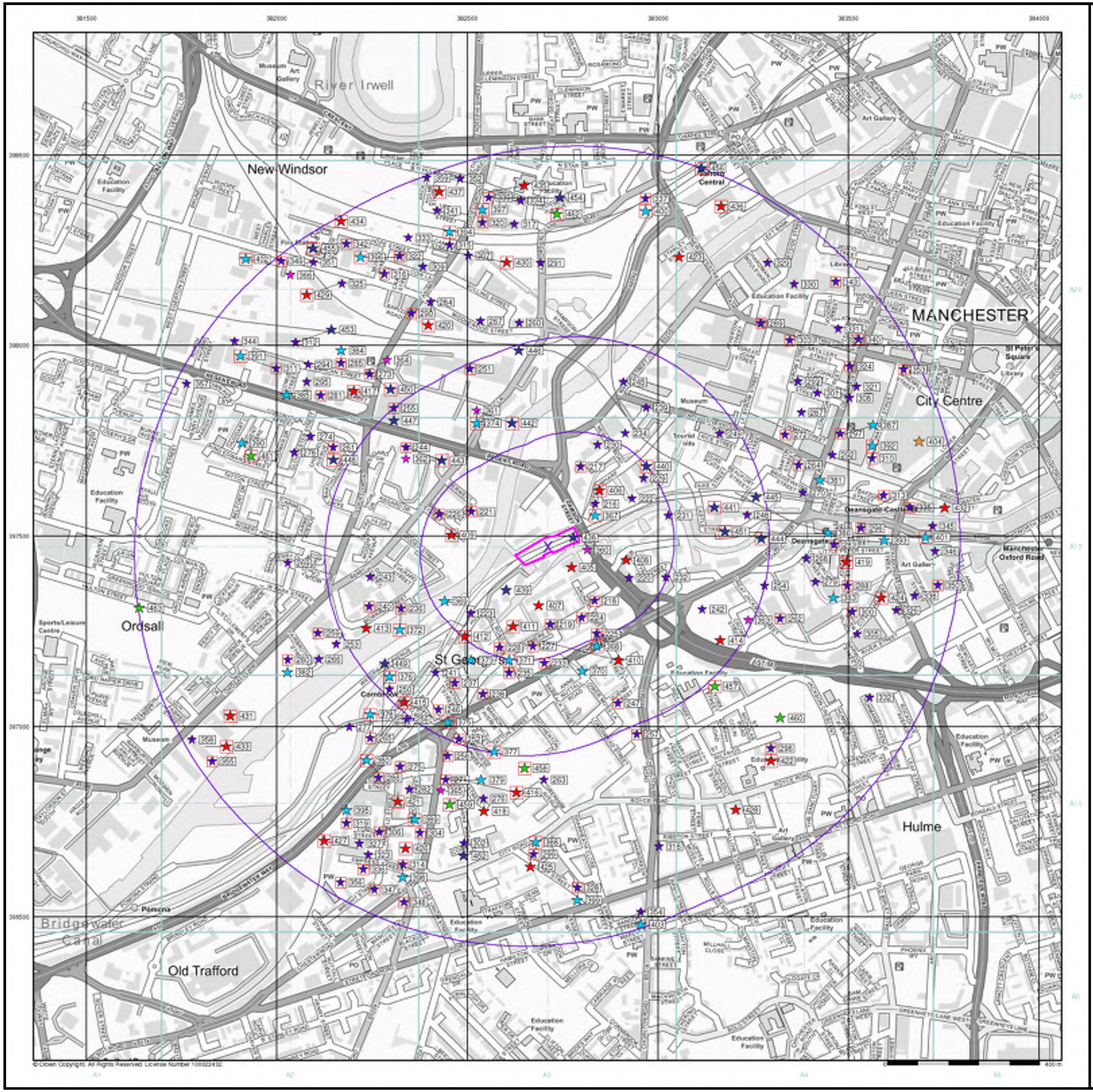
Order Number:	272481752_1_1
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Slice:	A
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Search Buffer (m):	1000

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Industrial Land Use Map

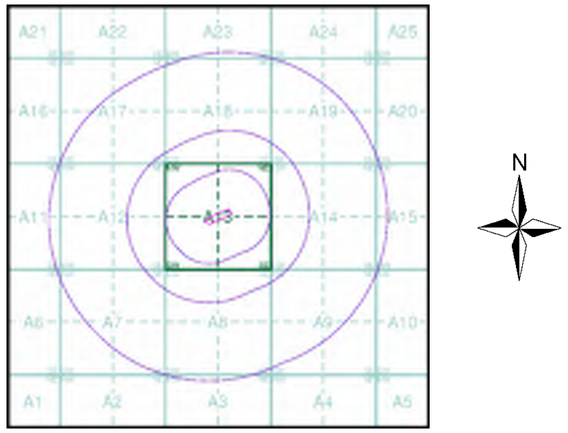
General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point
- ☐ Slice
- 8 Map ID

Industrial Land Use

- ★ Contemporary Trade Directory Entry
- ★ Fuel Station Entry
- Gas Pipeline
- ★ Points of Interest - Commercial Services
- ★ Points of Interest - Education and Health
- ★ Points of Interest - Manufacturing and Production
- ★ Points of Interest - Public Infrastructure
- ★ Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A



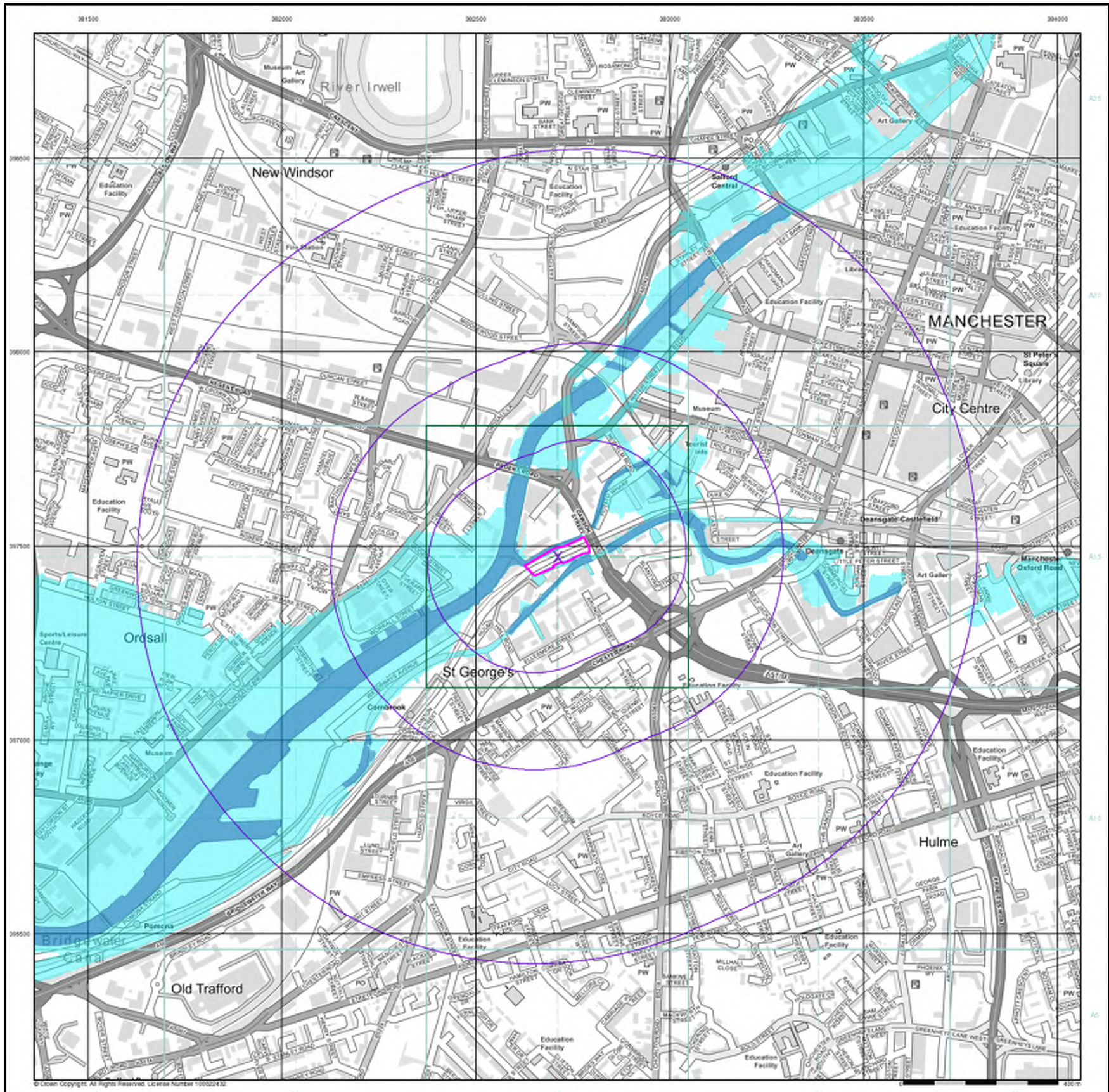
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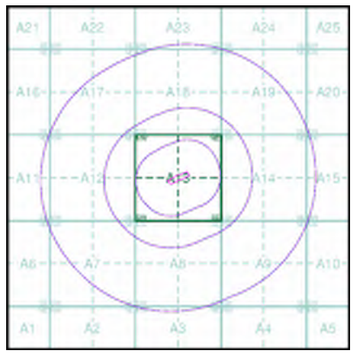
General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A



Order Details

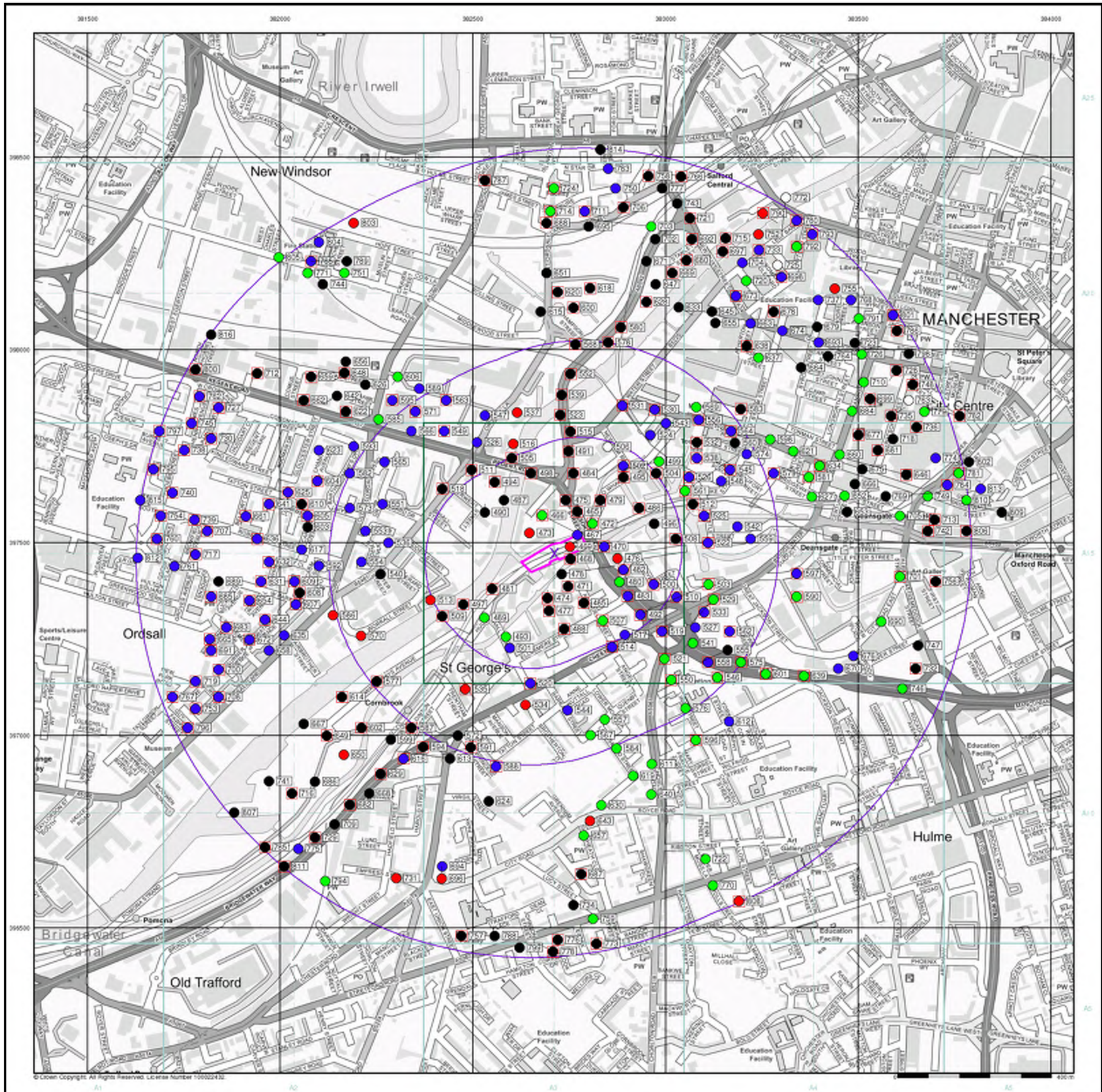
Order Number:	272481752_1_1
Customer Ref:	077442
National Grid Reference:	382710, 397470
Slice:	A
Site Area (Ha):	0.64
Search Buffer (m):	1000

Site Details

Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU

Landmark INFORMATION GROUP

Tel: 0844 844 9952
Fax: 0844 844 9951
Web: www.envirocheck.co.uk



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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

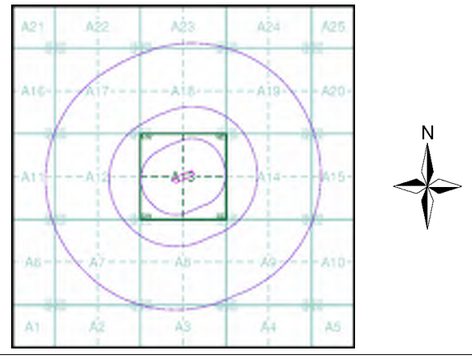
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A

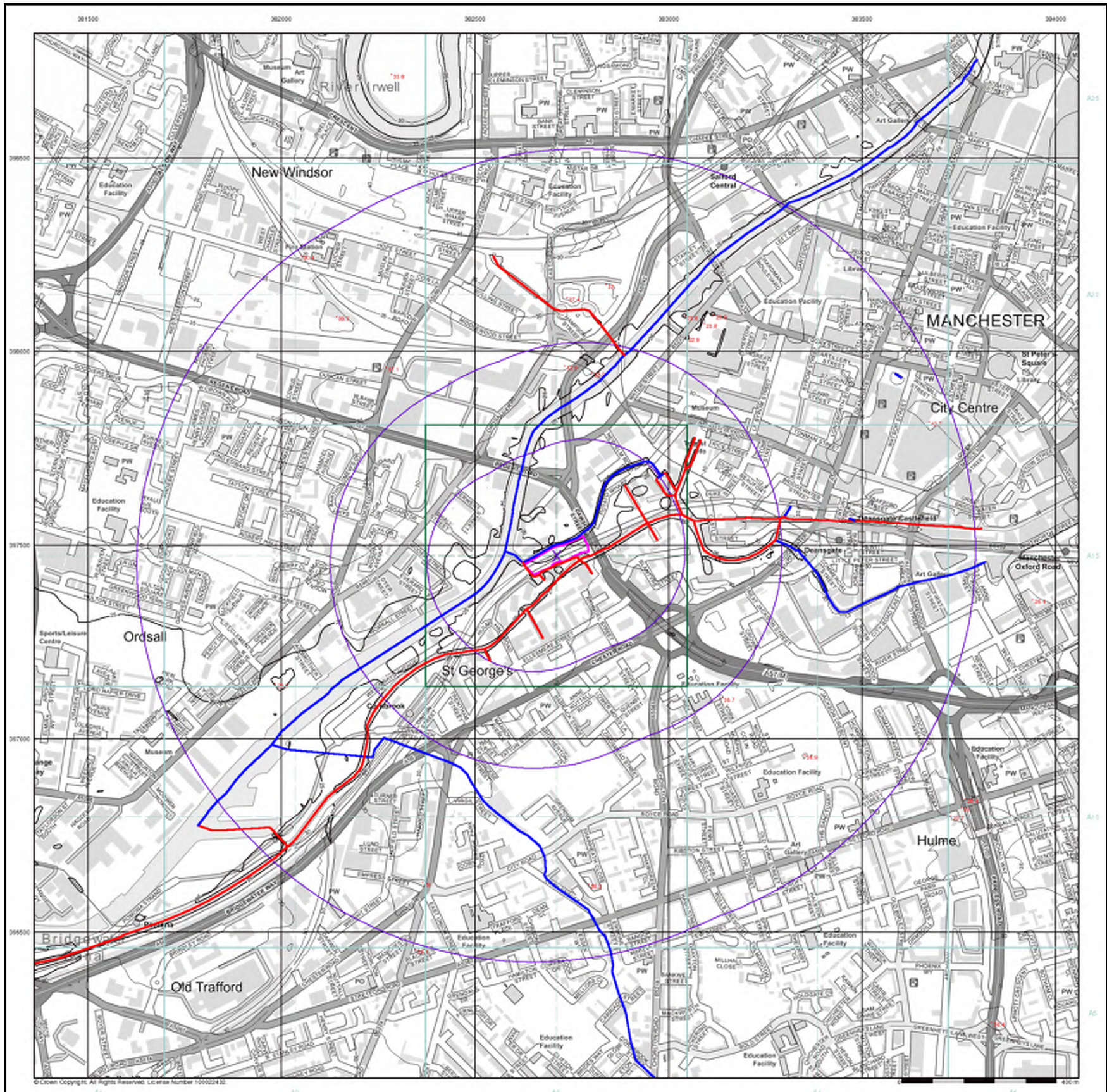


Order Details

Order Number:	272481752_1_1
Customer Ref:	077442
National Grid Reference:	382710, 397470
Slice:	A
Site Area (Ha):	0.64
Search Buffer (m):	1000

Site Details

Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU



curtins

General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

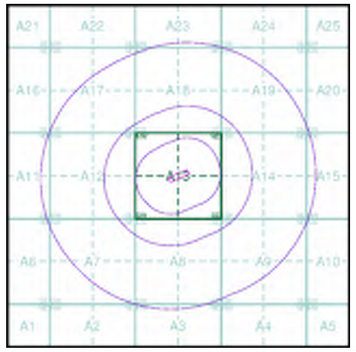
OS Water Network Data

- Canal
- Reservoir
- Foreshore
- Marsh
- Tidal River
- Inland River
- Drain
- Other
- Lake
- Transfer
- Lock Or Flight Of Locks
- Sea

Contours (height in meters)

- Standard Contour
- Master Contour
- Spot Height 167.3
- MLW Mean Low Water
- MHW Mean High Water

OS Water Network Map - Slice A



N

Order Details

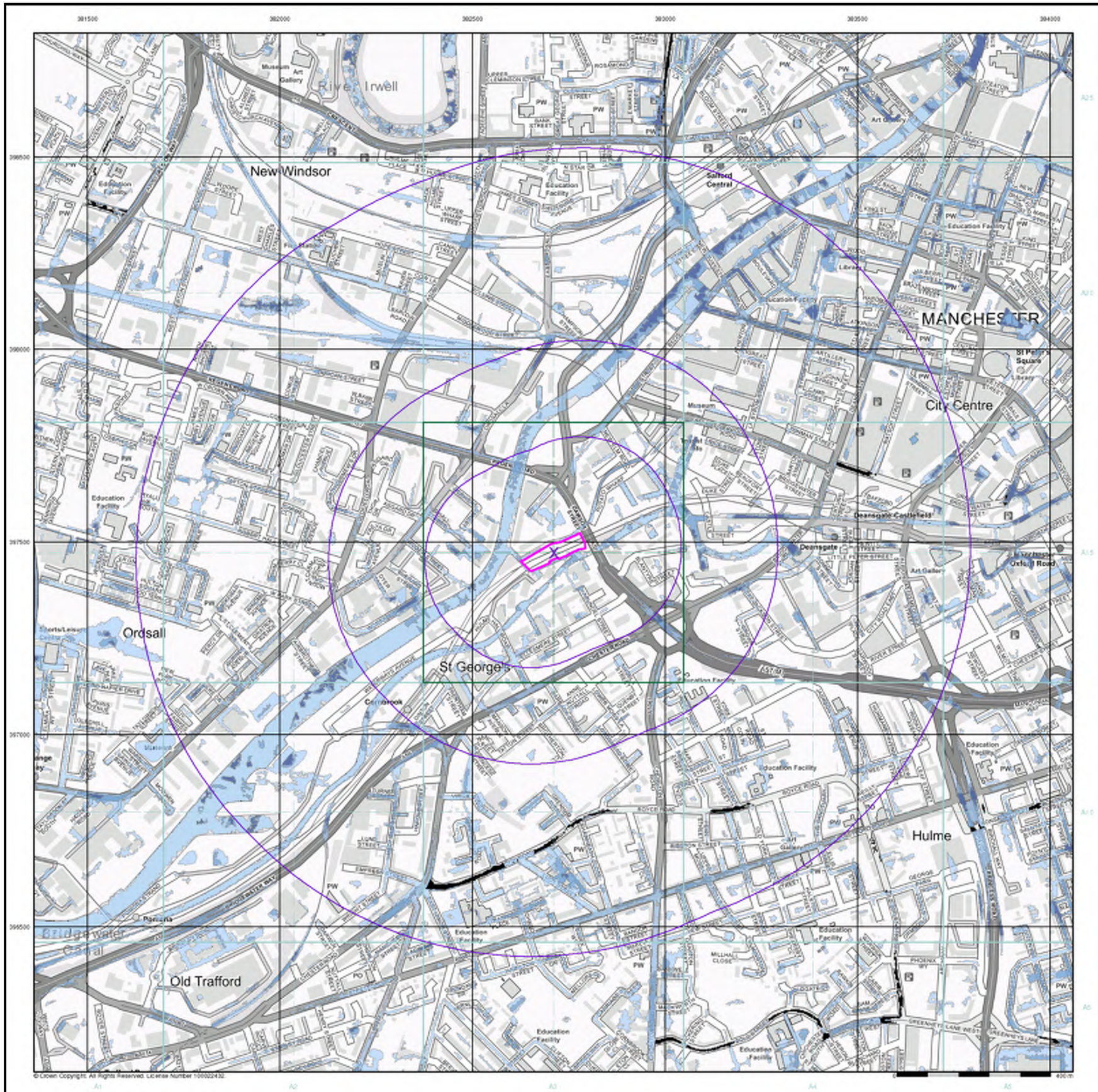
Order Number:	272481752_1_1
Customer Ref:	077442
National Grid Reference:	382710, 397470
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General

- Specified Site
- Specified Buffer(s)
- X Bearing Reference Point

Risk of Flooding from Surface Water

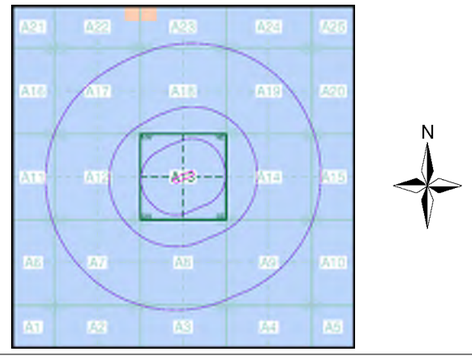
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



Order Details

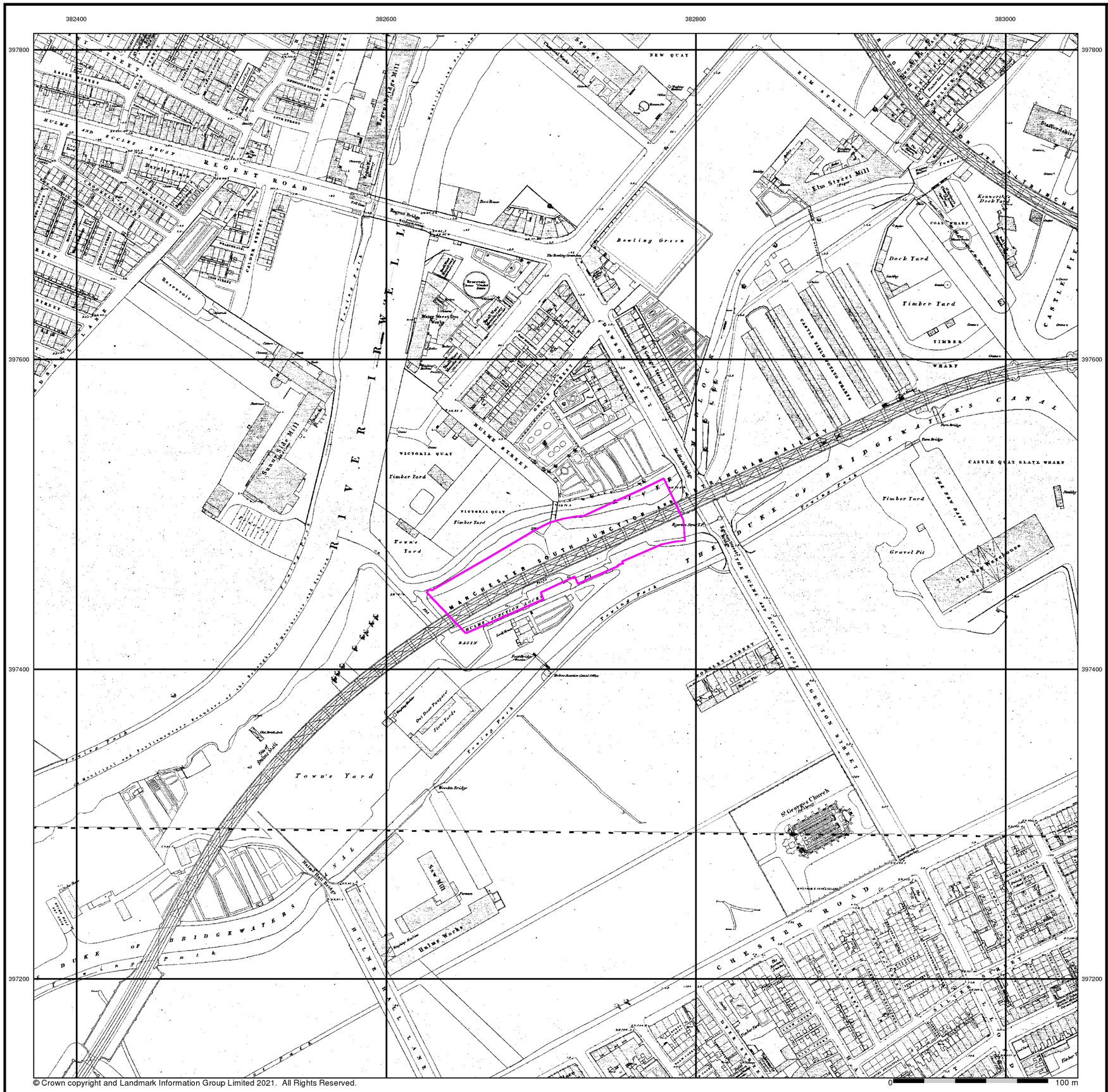
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Customer Ref:	077442
National Grid Reference:	382710, 397470
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curtins

Lancashire And Furness

Published 1851

Source map scale - 1:1,056

The 1:1056 scale of Ordnance Survey mapping was adopted from Ireland in 1848 and was used to survey towns with a population of over 4000, plus county towns of lesser population, in those counties mapped at the six-inch scale in 1841-55. The scale was the largest scale at which London was mapped by the Ordnance Survey and a 'skeleton' survey of the capital, showing little more than streets, street names, frontages and altitudes, was undertaken between 1848 and 1850. The majority of the 1:1056 surveys were later replaced by 1:500 surveys; although almost all the remainder were revised at this scale, sometimes more than once before 1895. The type of detail shown on the 1:1056 scale is broadly similar to that on 1:500; the apparent omission of minor details such as sewer access points and street lights may be as much a reflection of the generally earlier date of these plans, as of the specification of the map.

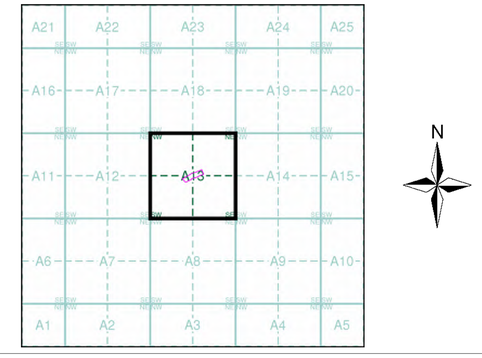
Please note: Due to the partial coverage of Historical Town Plans, it is possible that not all segments within an order will contain mapping. Only the segments that have Town Plan coverage will be generated.

Map Name(s) and Date(s)

000_00_032
1851
1:1,056

000_00_037
1851
1:1,056

Historical Town Plan - Segment A13



Order Details

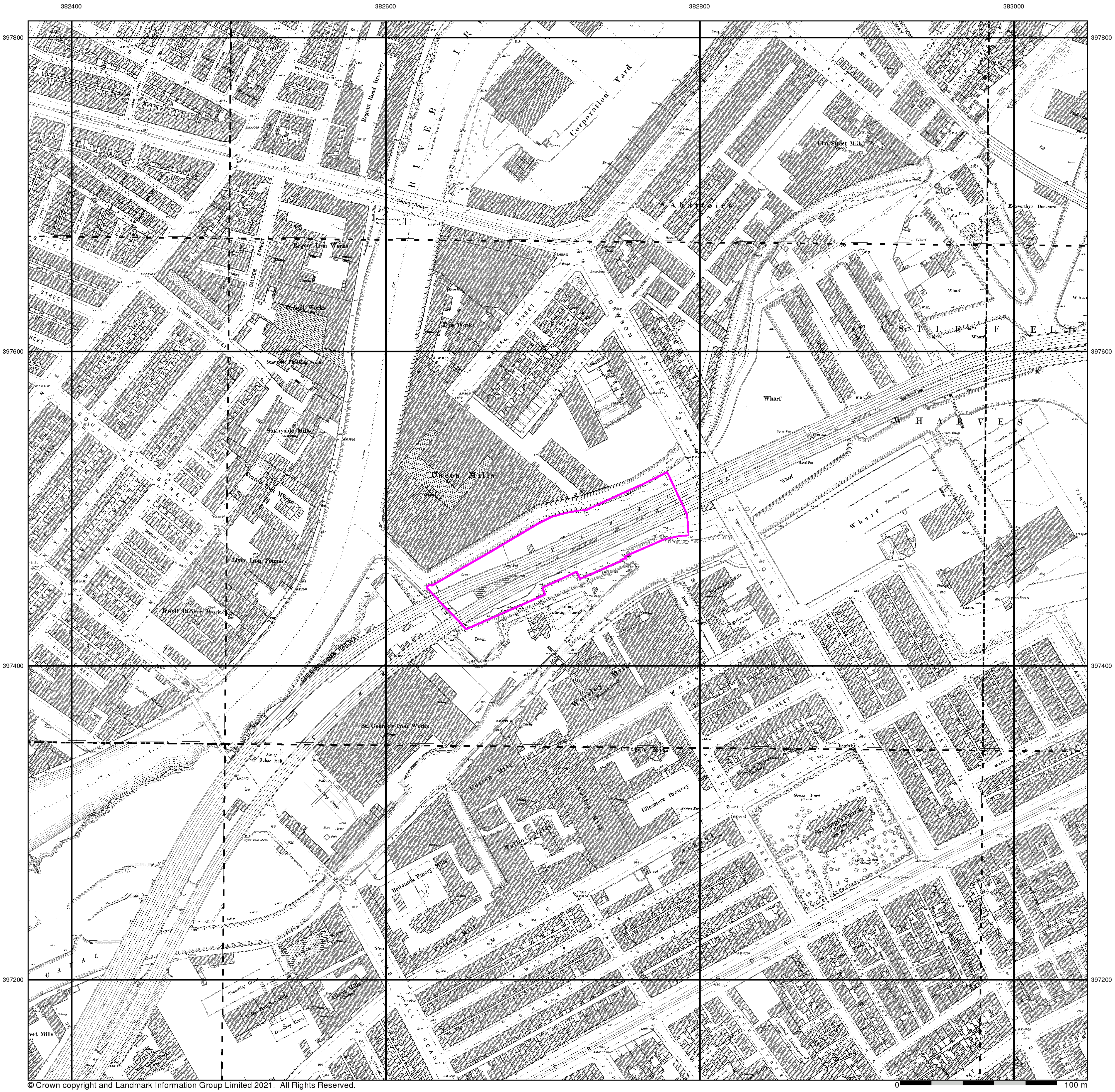
Order Number:	272481752_1_1
Customer Ref:	077442
National Grid Reference:	382710, 397470
Slice:	A
Site Area (Ha):	0.64
Search Buffer (m):	0

Site Details

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Lancashire And Furness

Published 1891

Source map scale - 1:500

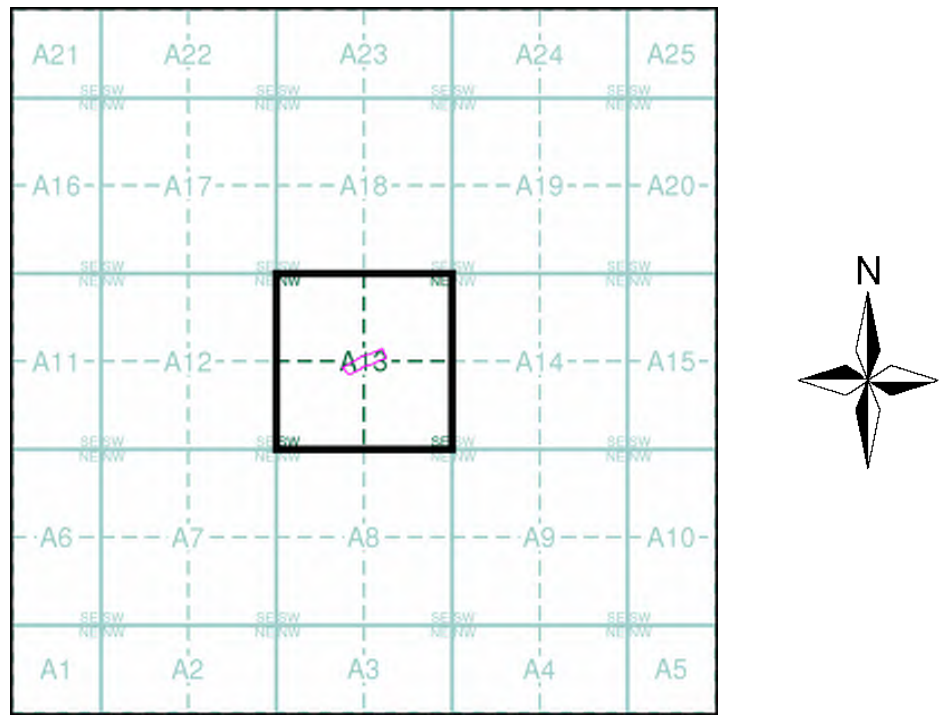
The 1:500 scale Ordnance Survey mapping was introduced in 1855 as a replacement for the 1:528 scale and to compliment the 1:2500 scale that had been implemented in 1853. By 1895, the 1:500 scale covered most towns over a population of about 4000 at the time of survey, although very few towns were mapped more than once at this scale, and none have been since 1910. The 1:500 scale gives particular emphasis to such features as lamp posts, man holes, arched passages and minor building projections. Also often featured are divisions between tenements, interior ground floor layouts of public buildings, and on earlier plans, the functions of the various parts of larger industrial premises are also indicated. Content of the plans does vary however, from one town to the next in terms of, for example, the completeness of railway tracks and the coverage of public buildings.

Please note: Due to the partial coverage of Historical Town Plans, it is possible that not all segments within an order will contain mapping. Only the segments that have Town Plan coverage will be generated.

Map Name(s) and Date(s)

104_10_006 1891 1:500	104_10_007 1891 1:500	104_10_008 1891 1:500
104_10_011 1891 1:500	104_10_012 1891 1:500	104_10_013 1891 1:500
104_10_016 1891 1:500	104_10_017 1891 1:500	104_10_018 1891 1:500

Historical Town Plan - Segment A13



Order Details

Order Number: 272481752_1_1
Customer Ref: 077442
National Grid Reference: 382710, 397470
Slice: A
Site Area (Ha): 0.64
Search Buffer (m): 0

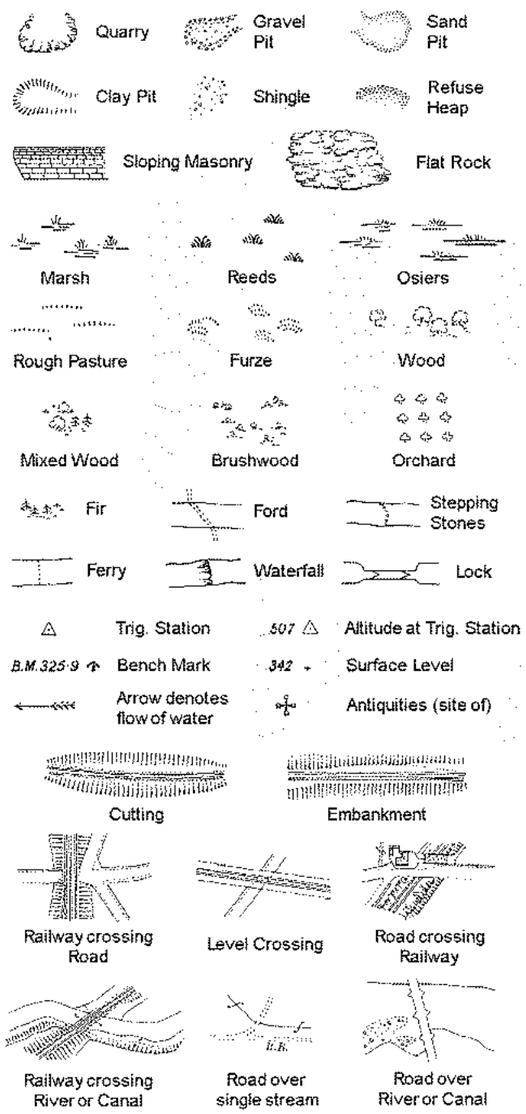
Site Details

Embassy Village Scheme, Dawson St, Castlefield,
MANCHESTER, M15 4NU

Tel: 0844 844 9952
Fax: 0844 844 9951
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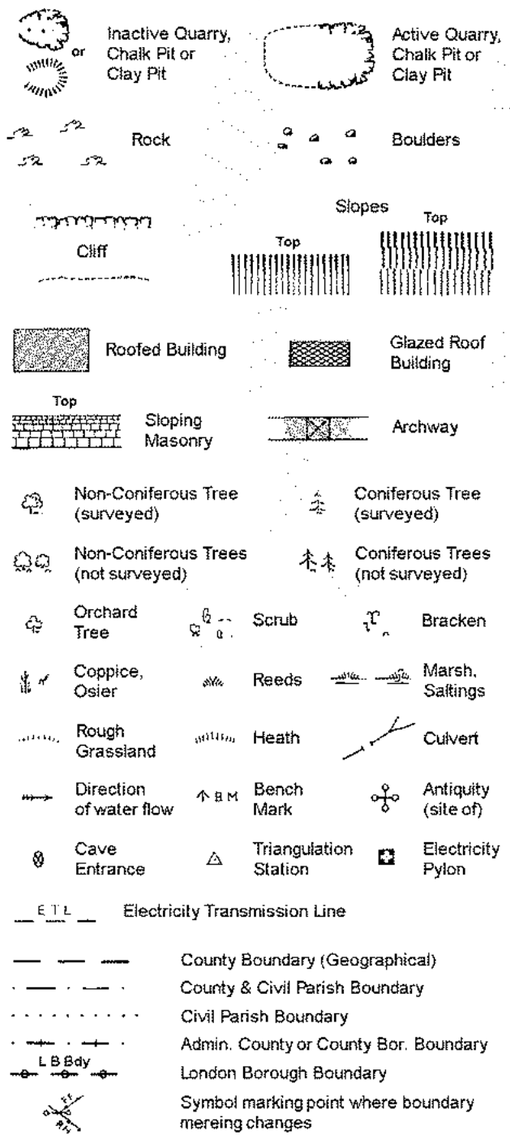
Historical Mapping Legends

Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



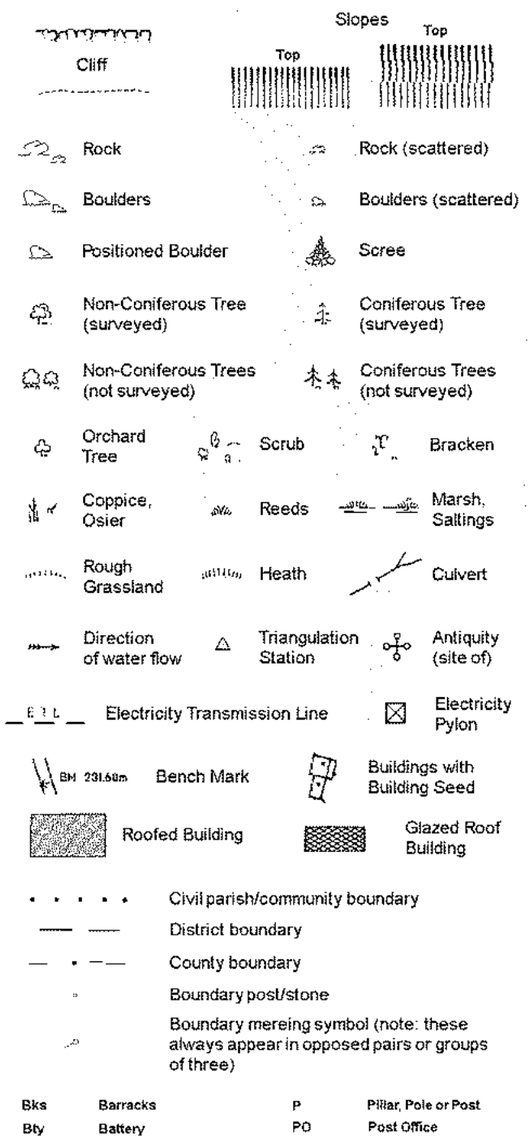
B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	Sl.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250



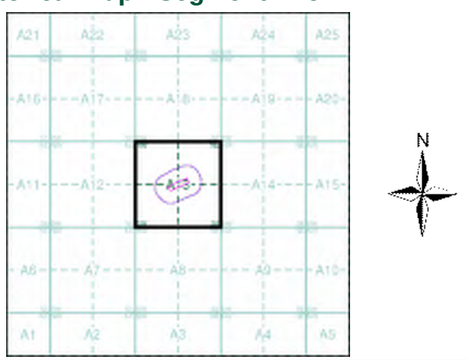
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:2,500	1908	2
Lancashire And Furness	1:2,500	1932	3
Ordnance Survey Plan	1:1,250	1948 - 1949	4
Ordnance Survey Plan	1:2,500	1950	5
Ordnance Survey Plan	1:1,250	1953 - 1963	6
Ordnance Survey Plan	1:2,500	1956 - 1965	7
Ordnance Survey Plan	1:1,250	1960 - 1980	8
Ordnance Survey Plan	1:2,500	1965	9
Ordnance Survey Plan	1:1,250	1969 - 1981	10
Supply of Unpublished Survey Information	1:1,250	1974	11
Additional SIMs	1:1,250	1978 - 1982	12
Ordnance Survey Plan	1:1,250	1982	13
Additional SIMs	1:1,250	1984 - 1990	14
Additional SIMs	1:1,250	1990	15
Additional SIMs	1:1,250	1990	16
Large-Scale National Grid Data	1:1,250	1992	17
Additional SIMs	1:1,250	1992	18
Large-Scale National Grid Data	1:1,250	1993 - 1995	19
Large-Scale National Grid Data	1:1,250	1994 - 1995	20
Large-Scale National Grid Data	1:1,250	1995	21
Large-Scale National Grid Data	1:1,250	1995	22
Large-Scale National Grid Data	1:1,250	1996	23
Historical Aerial Photography	1:2,500	2000	24

Historical Map - Segment A13



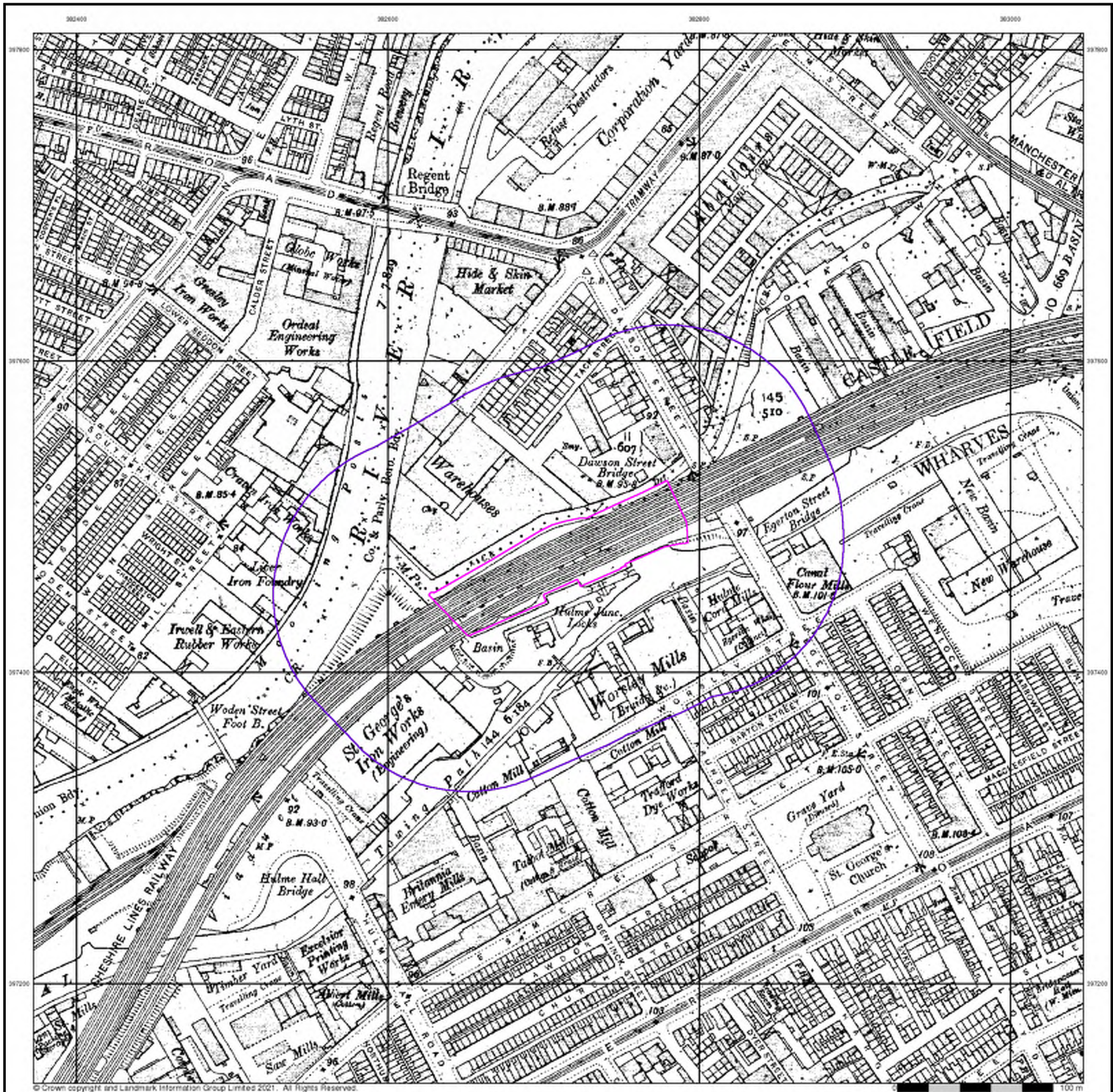
Order Details

Order Number: 272481752_1_1
Customer Ref: 077442
National Grid Reference: 382710, 397470
Slice: A
Site Area (Ha): 0.64
Search Buffer (m): 100

Site Details

Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU

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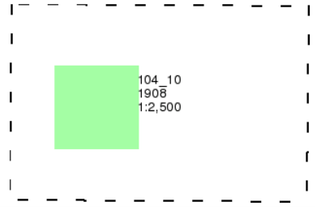
Lancashire And Furness

Published 1908

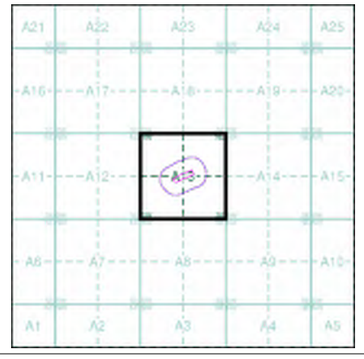
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

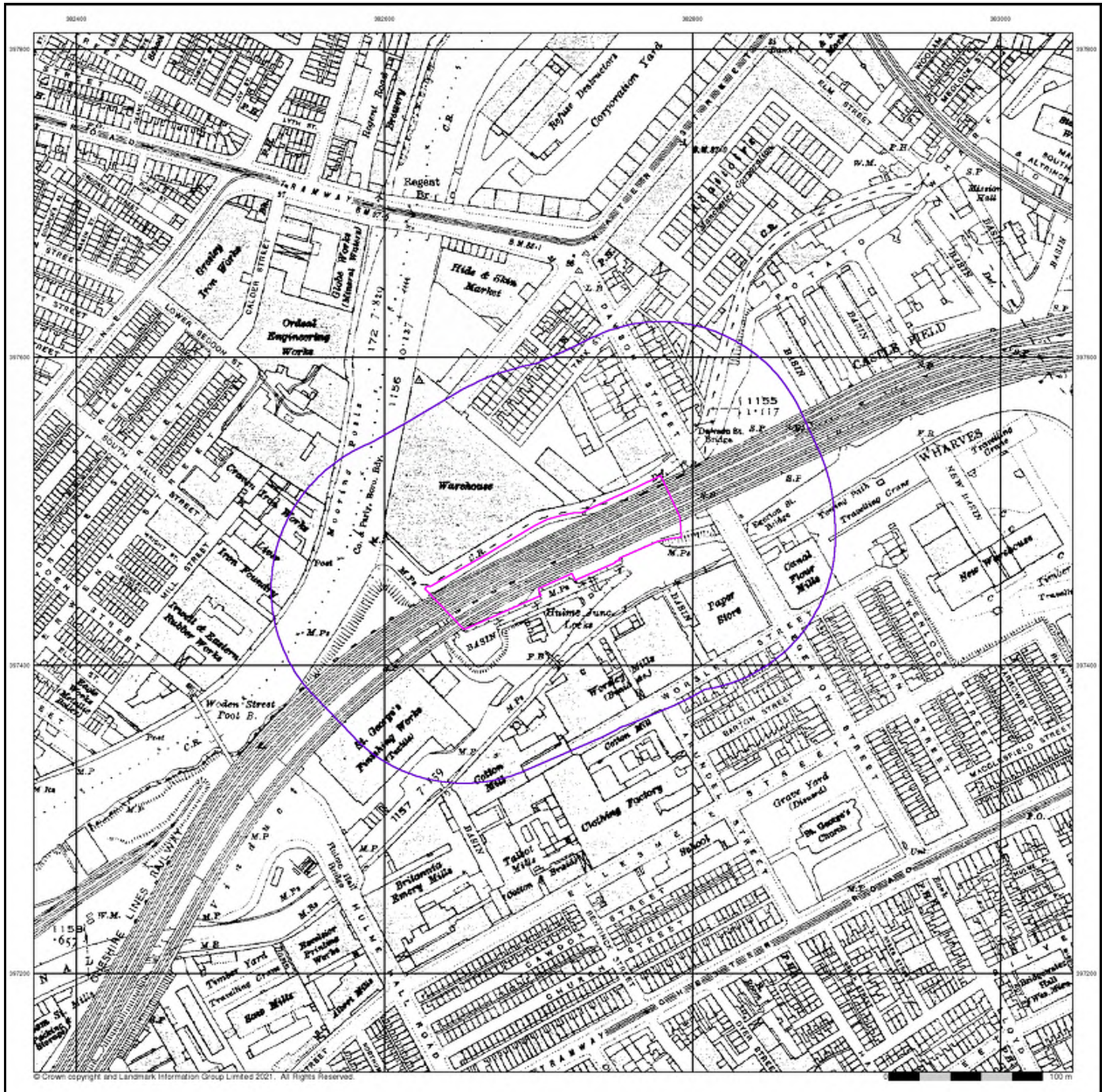
Order Number:	272481752_1_1
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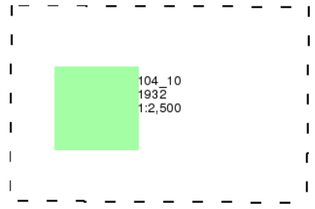
Lancashire And Furness

Published 1932

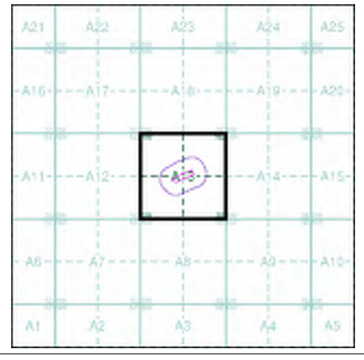
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13

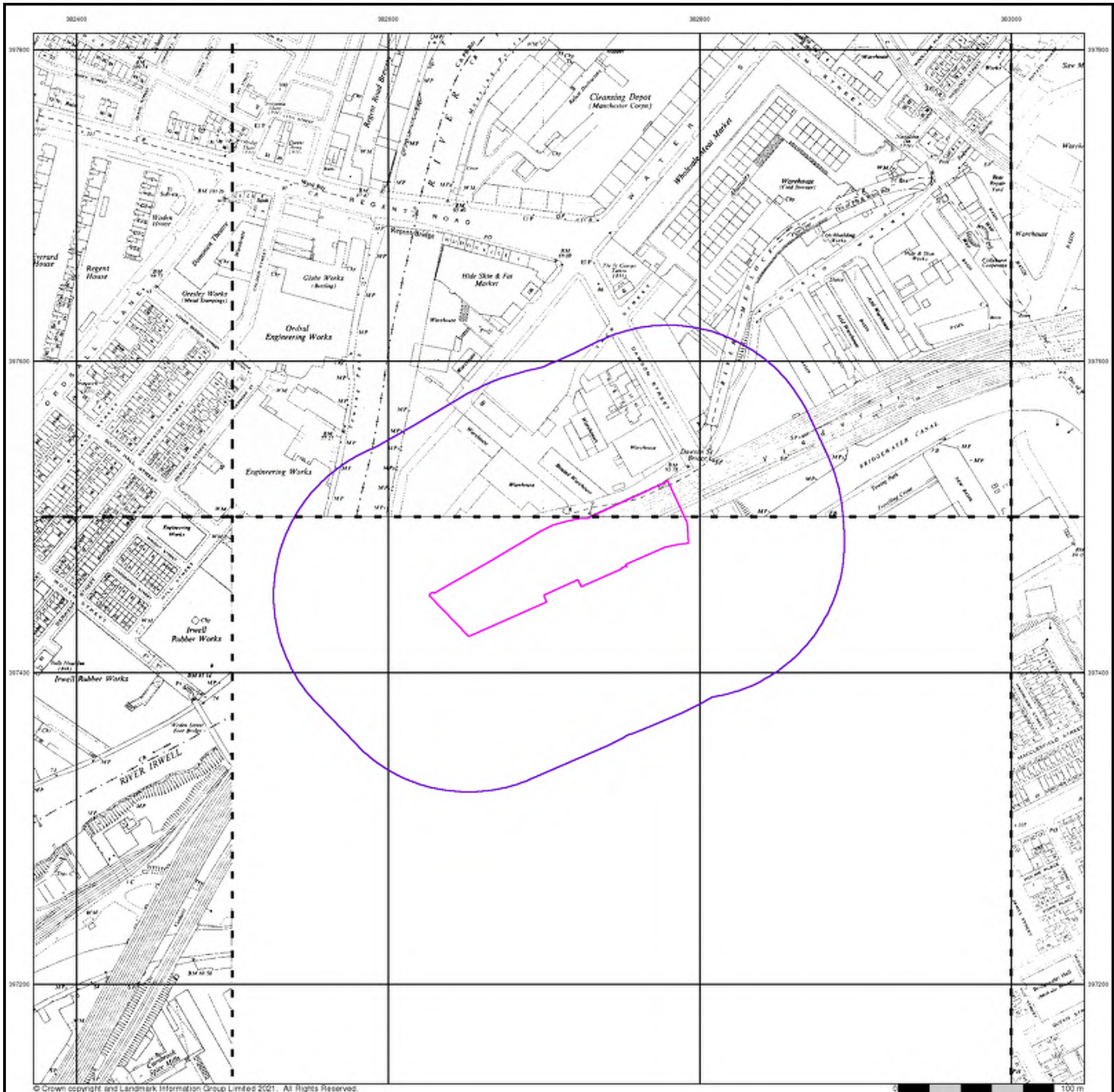


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Site Details

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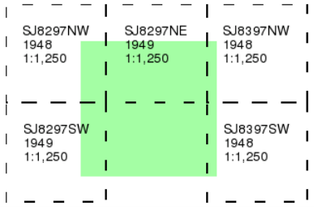
Ordnance Survey Plan

Published 1948 - 1949

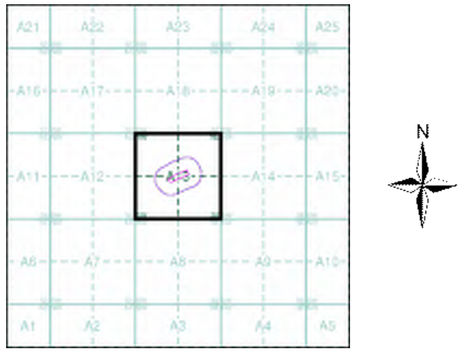
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13

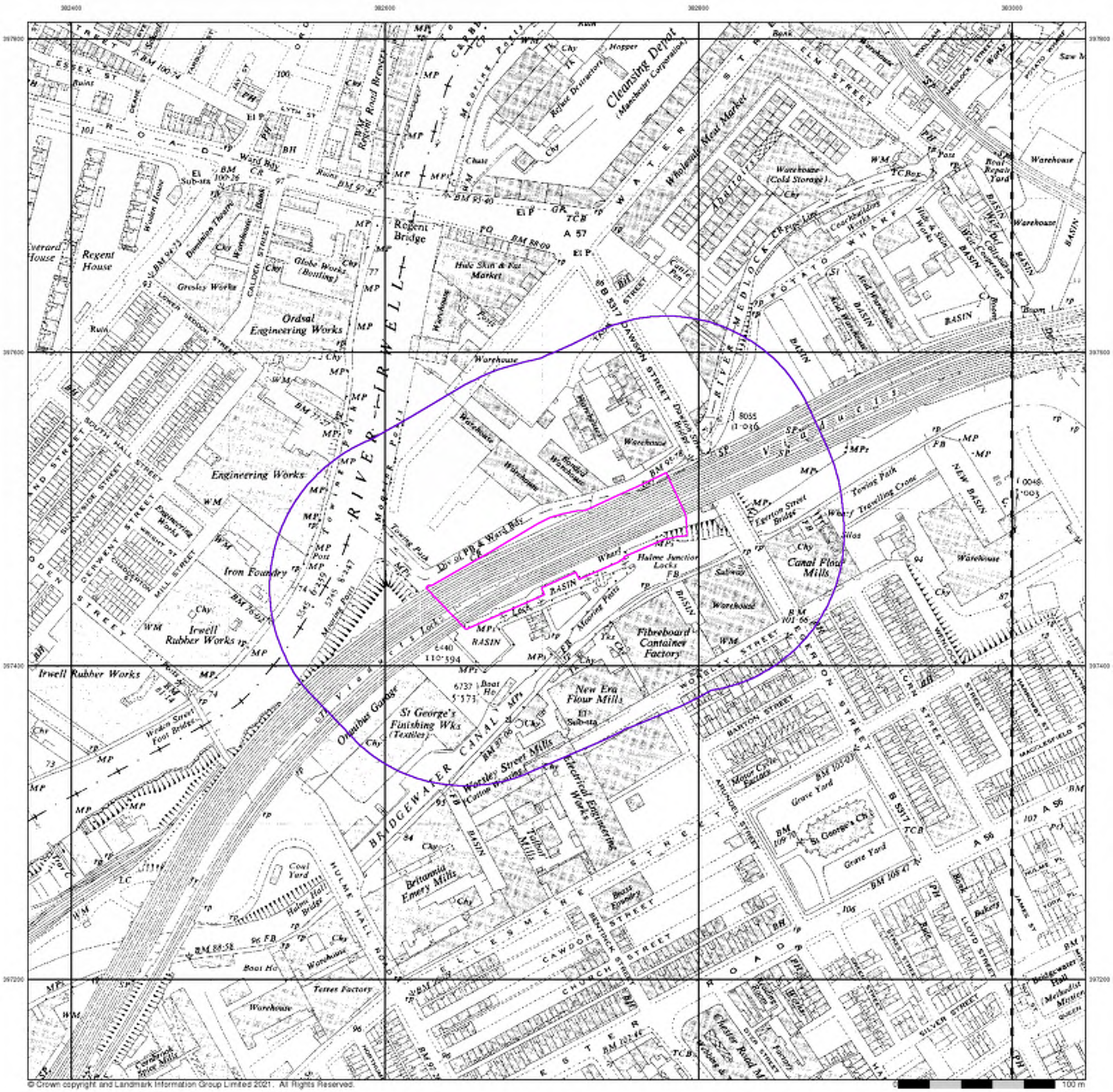


Order Details

Order Number:	272481752_1_1
Customer Ref:	077442
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Slice:	A
Site Area (Ha):	0.64
Search Buffer (m):	100

Site Details

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![curtins]

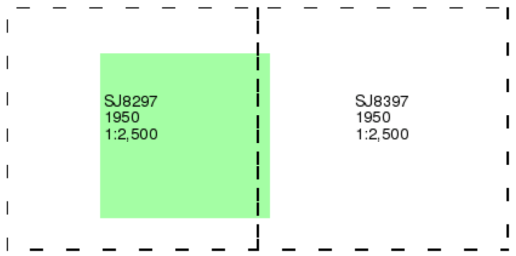
Ordnance Survey Plan

Published 1950

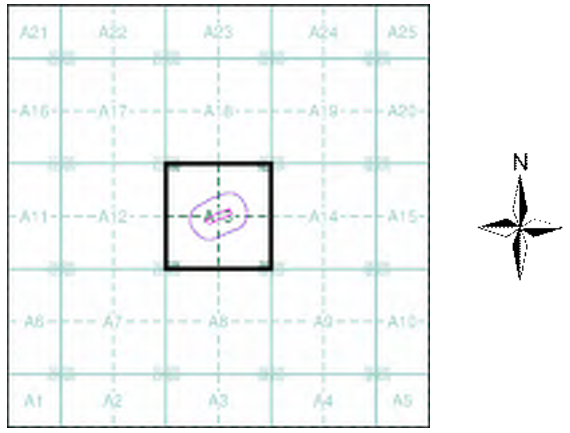
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13

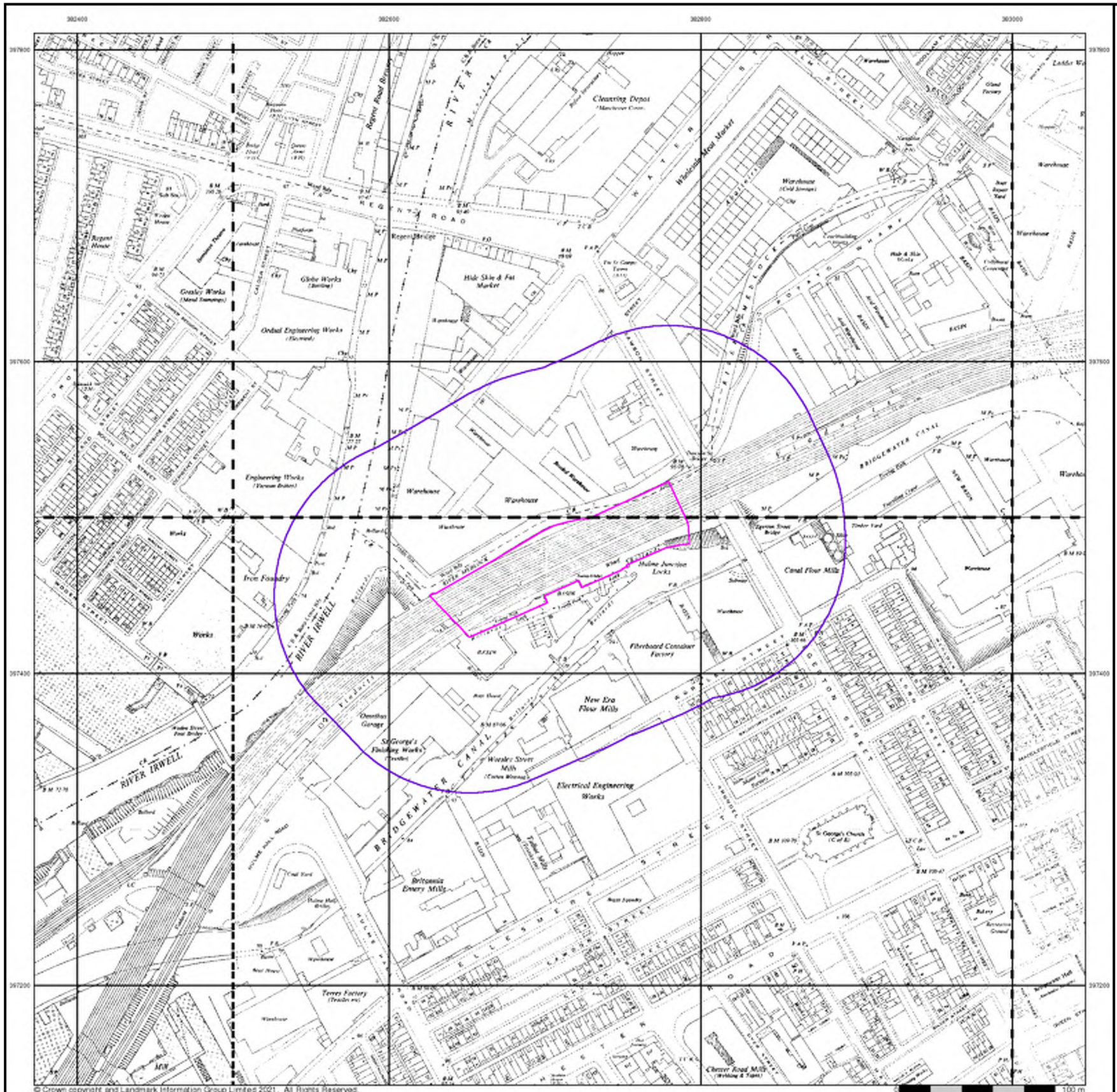


Order Details

Order Number: 272481752_1_1
Customer Ref: 077442
National Grid Reference: 382710, 397470
Slice: A
Site Area (Ha): 0.64
Search Buffer (m): 100

Site Details

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curtins

Ordnance Survey Plan

Published 1953 - 1963

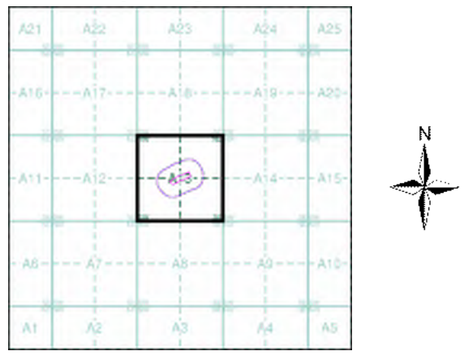
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SJ8297NW 1953 1:1,250	SJ8297NE 1953 1:1,250	SJ8397NW 1955 1:1,250
SJ8297SW 1963 1:1,250	SJ8297SE 1955 1:1,250	SJ8397SW 1954 1:1,250

Historical Map - Segment A13



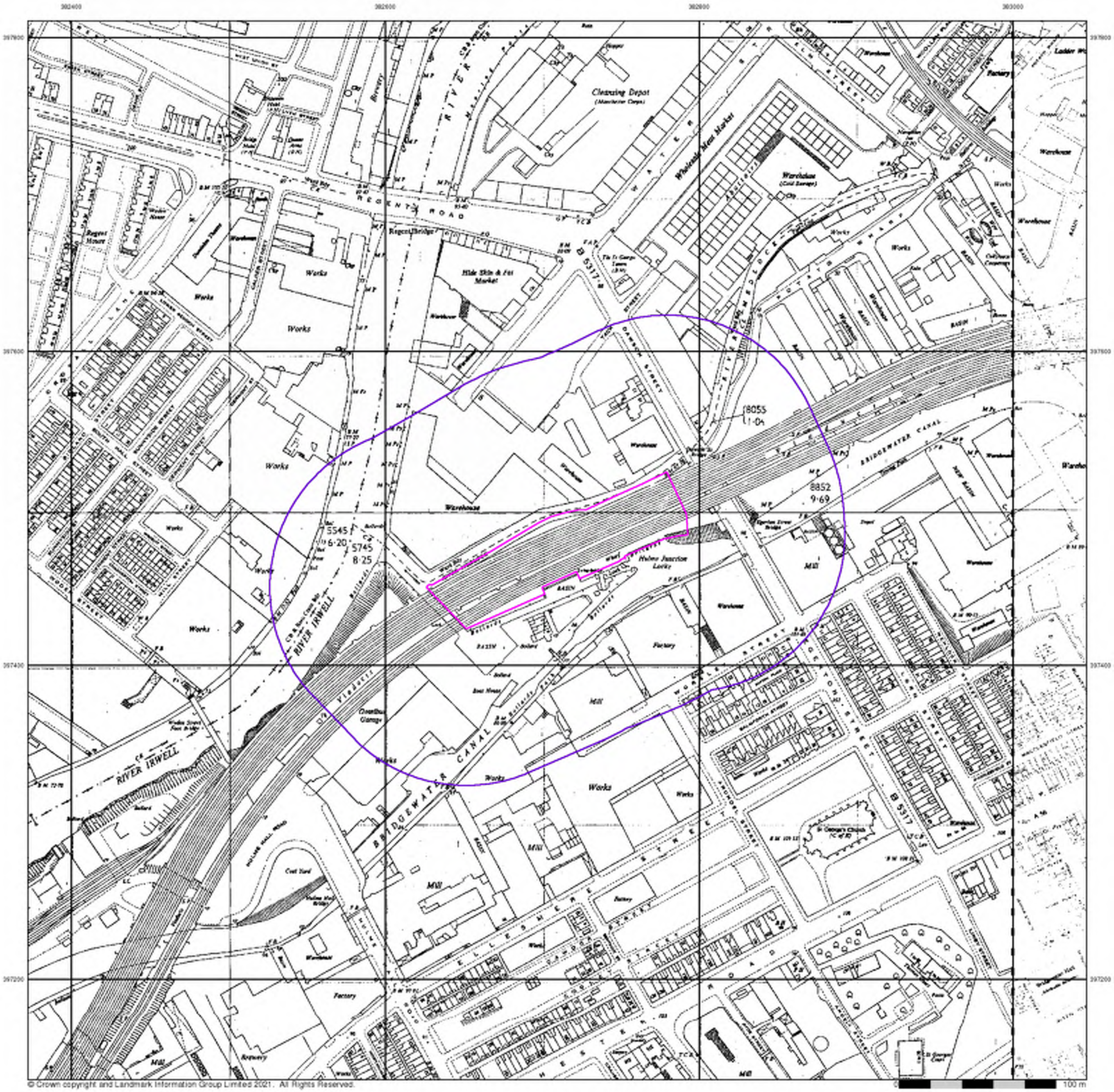
Order Details

Order Number:	272481752_1_1
Customer Ref:	077442
National Grid Reference:	382710, 397470
Slice:	A
Site Area (Ha):	0.64
Search Buffer (m):	100

Site Details

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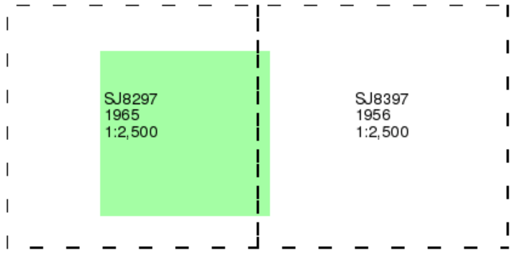
Ordnance Survey Plan

Published 1956 - 1965

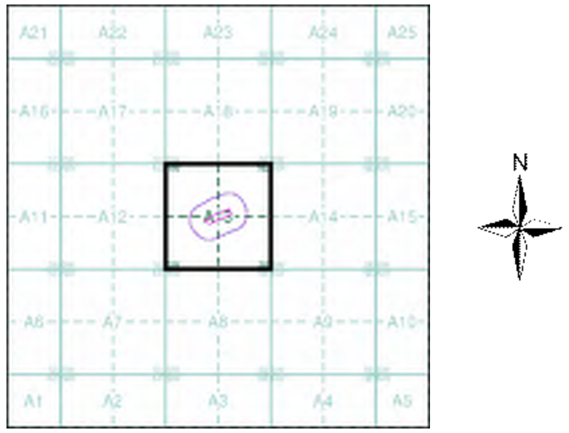
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



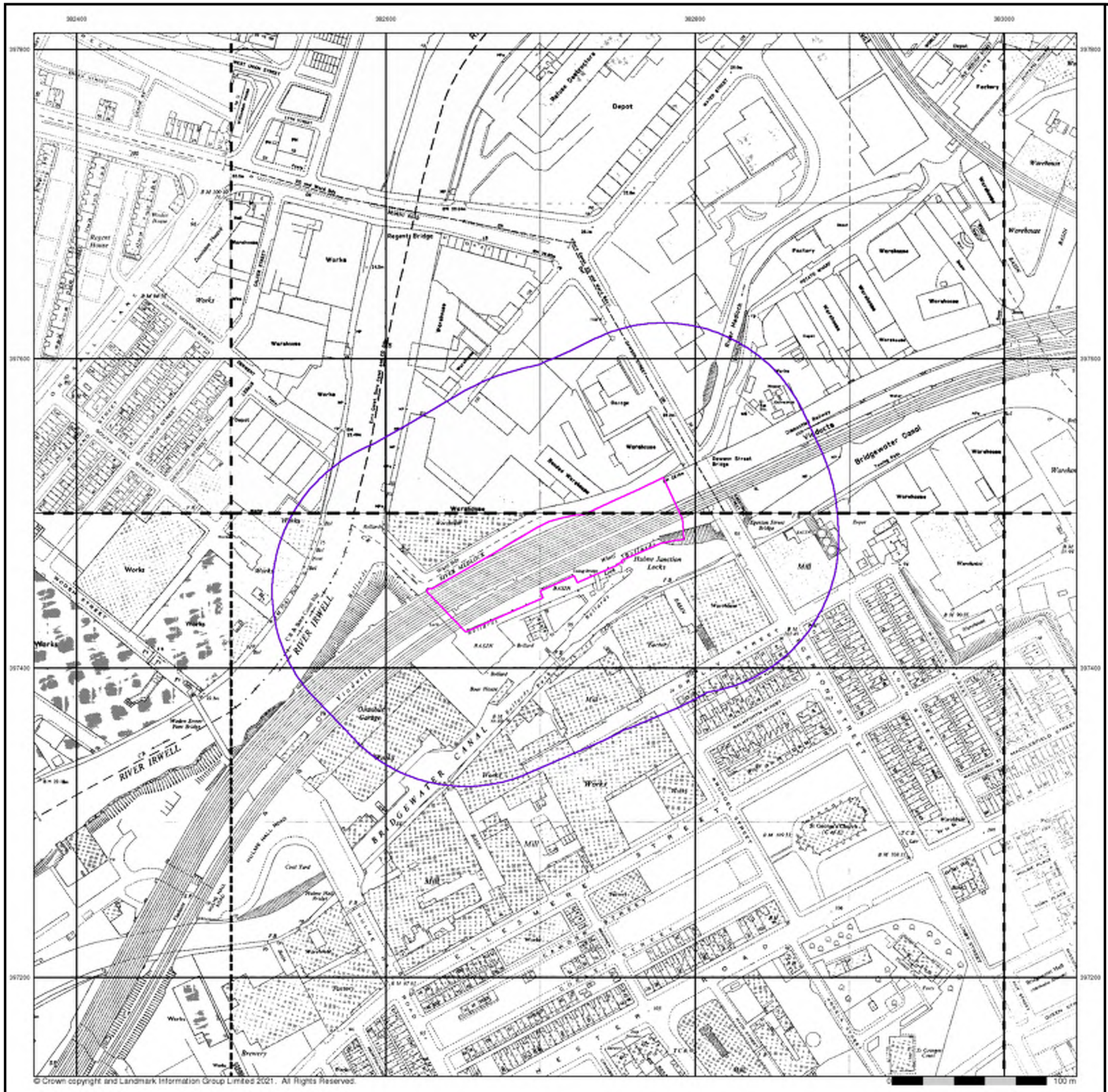
Order Details

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Customer Ref: 077442
National Grid Reference: 382710, 397470
Slice: A
Site Area (Ha): 0.64
Search Buffer (m): 100

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Ordnance Survey Plan

Published 1960 - 1980

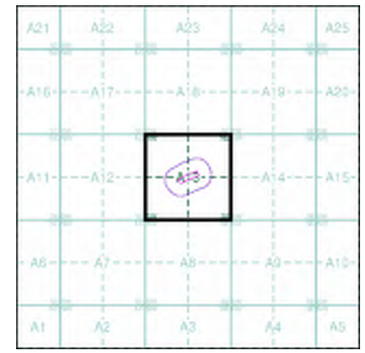
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)

SJ8297NW 1960 1:1,250	SJ8297NE 1980 1:1,250	SJ8397NW 1963 1:1,250
SJ8297SW 1977 1:1,250	SJ8297SE 1963 1:1,250	SJ8397SW 1960 1:1,250

Historical Map - Segment A13

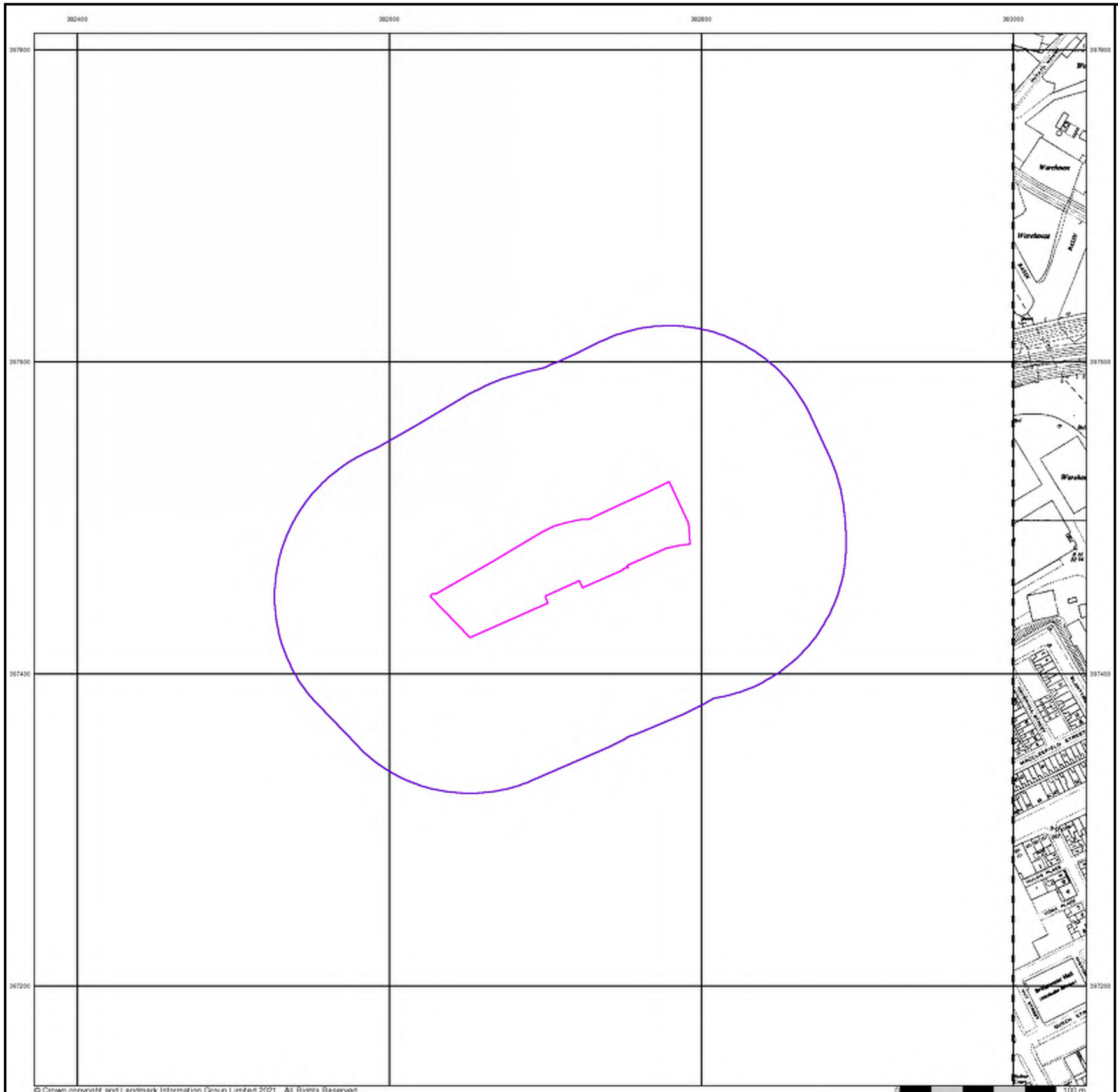


Order Details

Order Number:	272481752_1_1
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National Grid Reference:	382710, 397470
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Search Buffer (m):	100

Site Details

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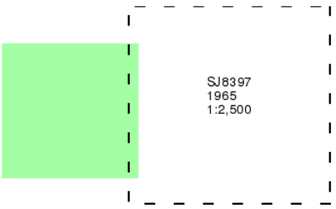
Ordnance Survey Plan

Published 1965

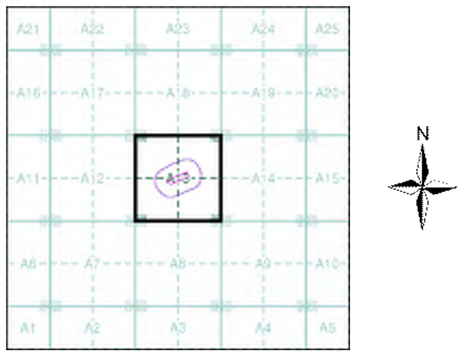
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



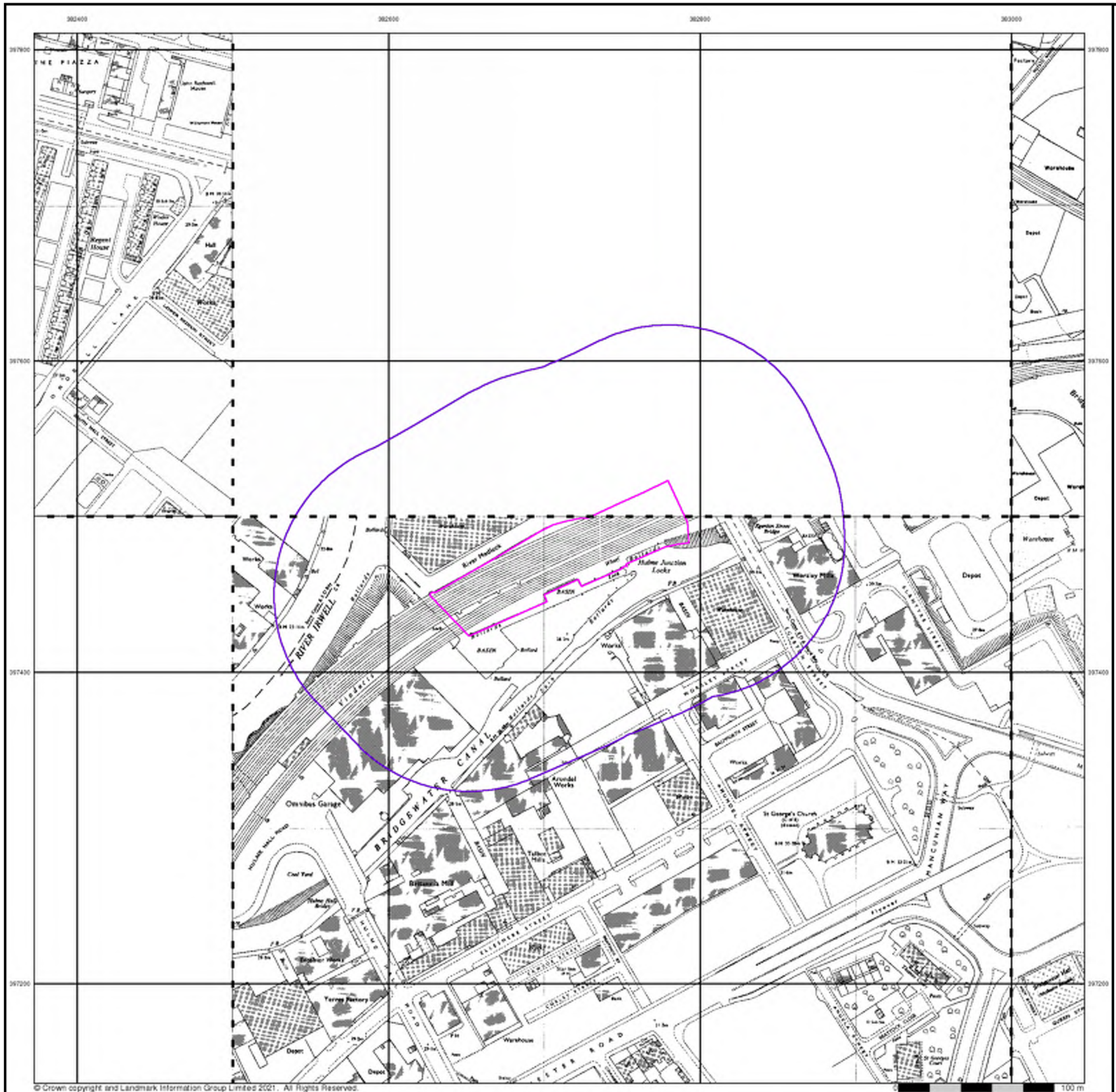
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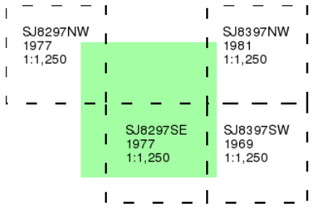
Ordnance Survey Plan

Published 1969 - 1981

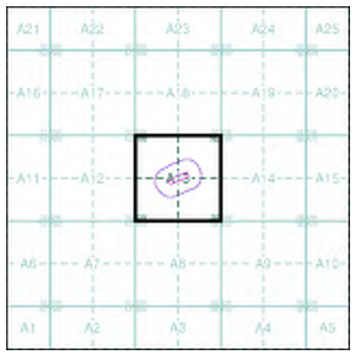
Source map scale - 1:1,250

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13

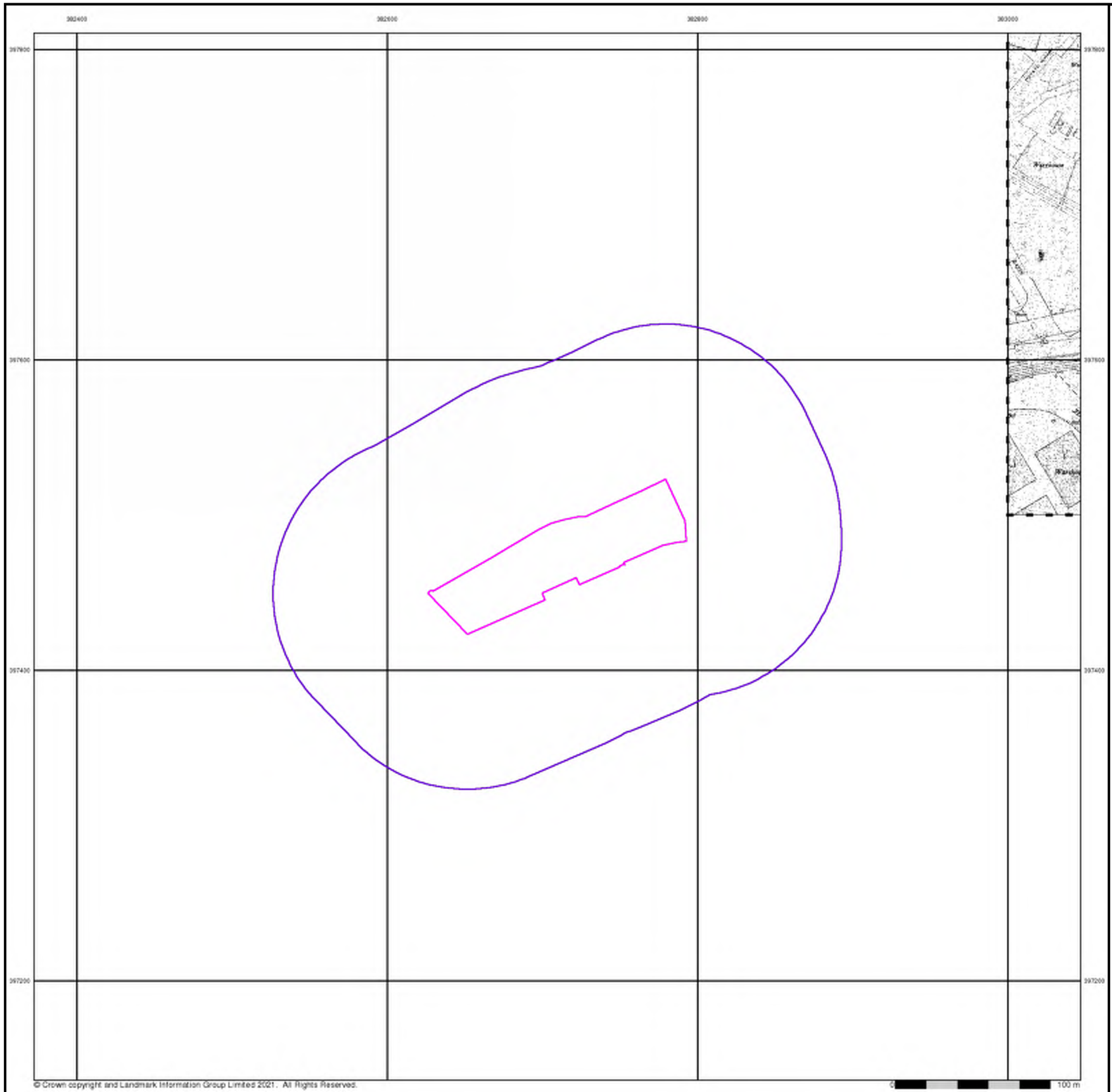


Order Details

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Customer Ref:	077442
National Grid Reference:	382710, 397470
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Site Details

Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU



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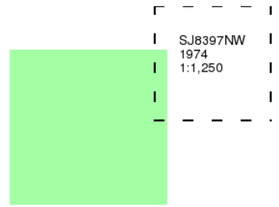
Supply of Unpublished Survey Information

Published 1974

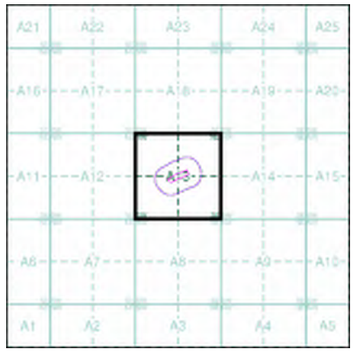
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a `work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13

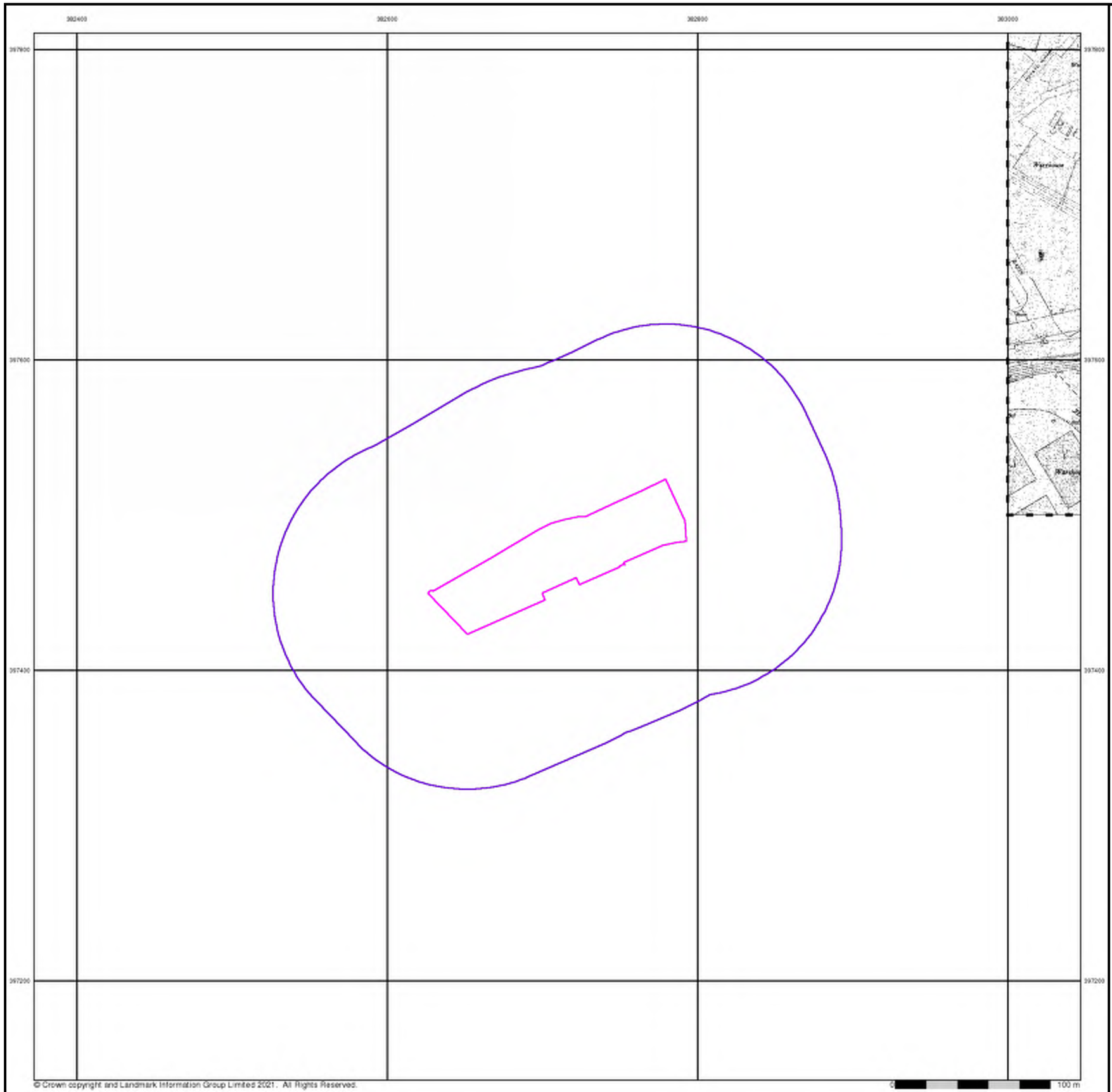


Order Details

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Site Details

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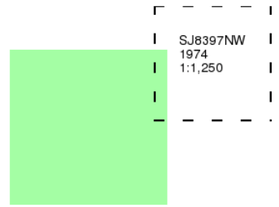
Supply of Unpublished Survey Information

Published 1974

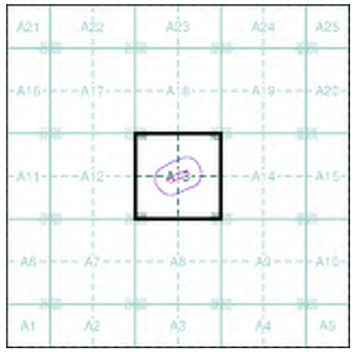
Source map scale - 1:1,250

SUSI maps (Supply of Unpublished Survey Information) were produced between 1972 and 1977, mainly for internal use at Ordnance Survey. These were more of a `work-in-progress' plan as they showed updates of individual areas on a map. These maps were unpublished, and they do not represent a single moment in time. They were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13

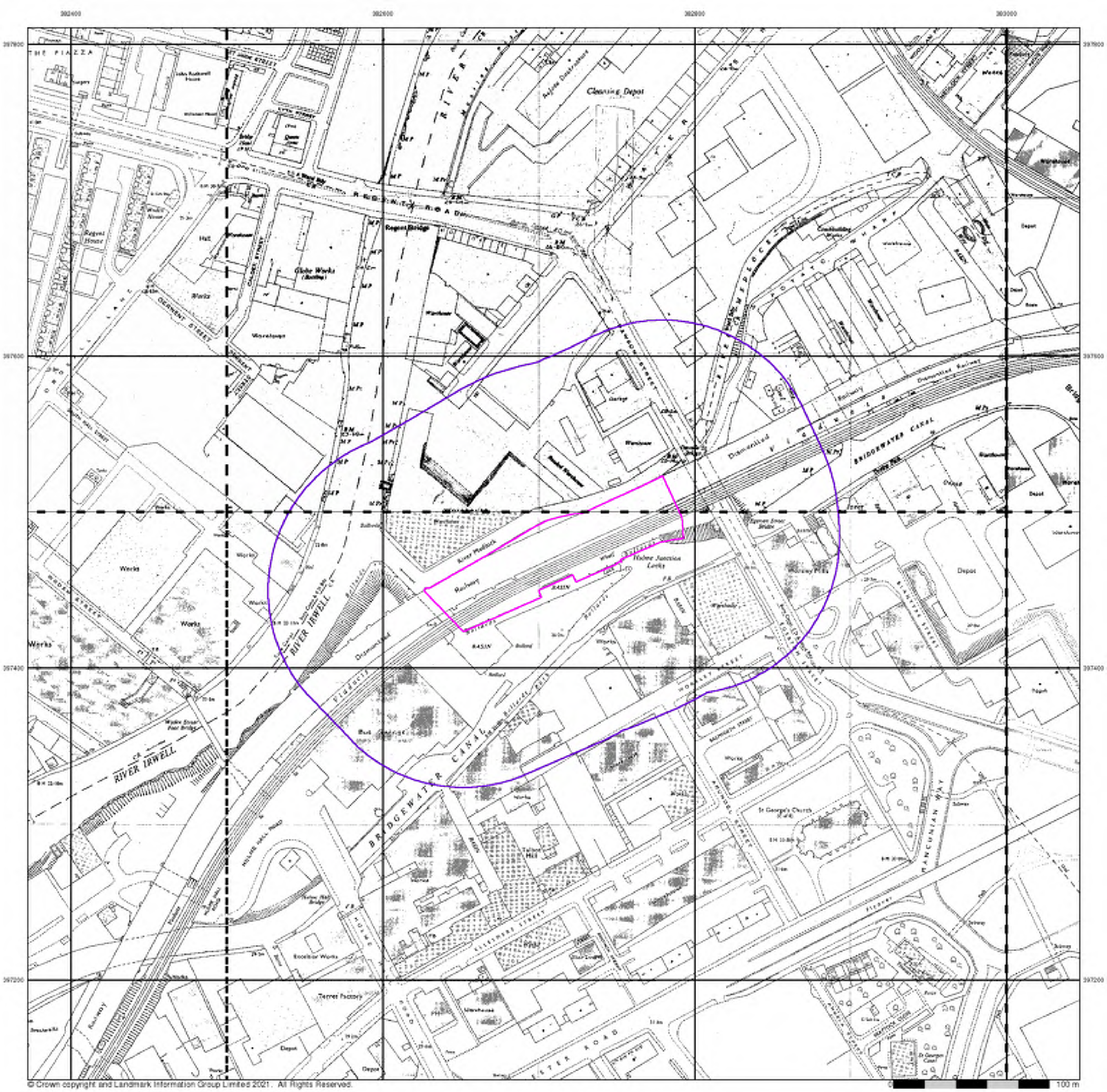


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Customer Ref:	077442
National Grid Reference:	382710, 397470
Slice:	A
Site Area (Ha):	0.64
Search Buffer (m):	100

Site Details

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Additional SIMs

Published 1978 - 1982

Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SJ8297NW 1979 1:1,250	SJ8297NE 1978 1:1,250	SJ8397NW 1981 1:1,250
SJ8297SW 1982 1:1,250	SJ8297SE 1982 1:1,250	SJ8397SW 1980 1:1,250

Historical Map - Segment A13



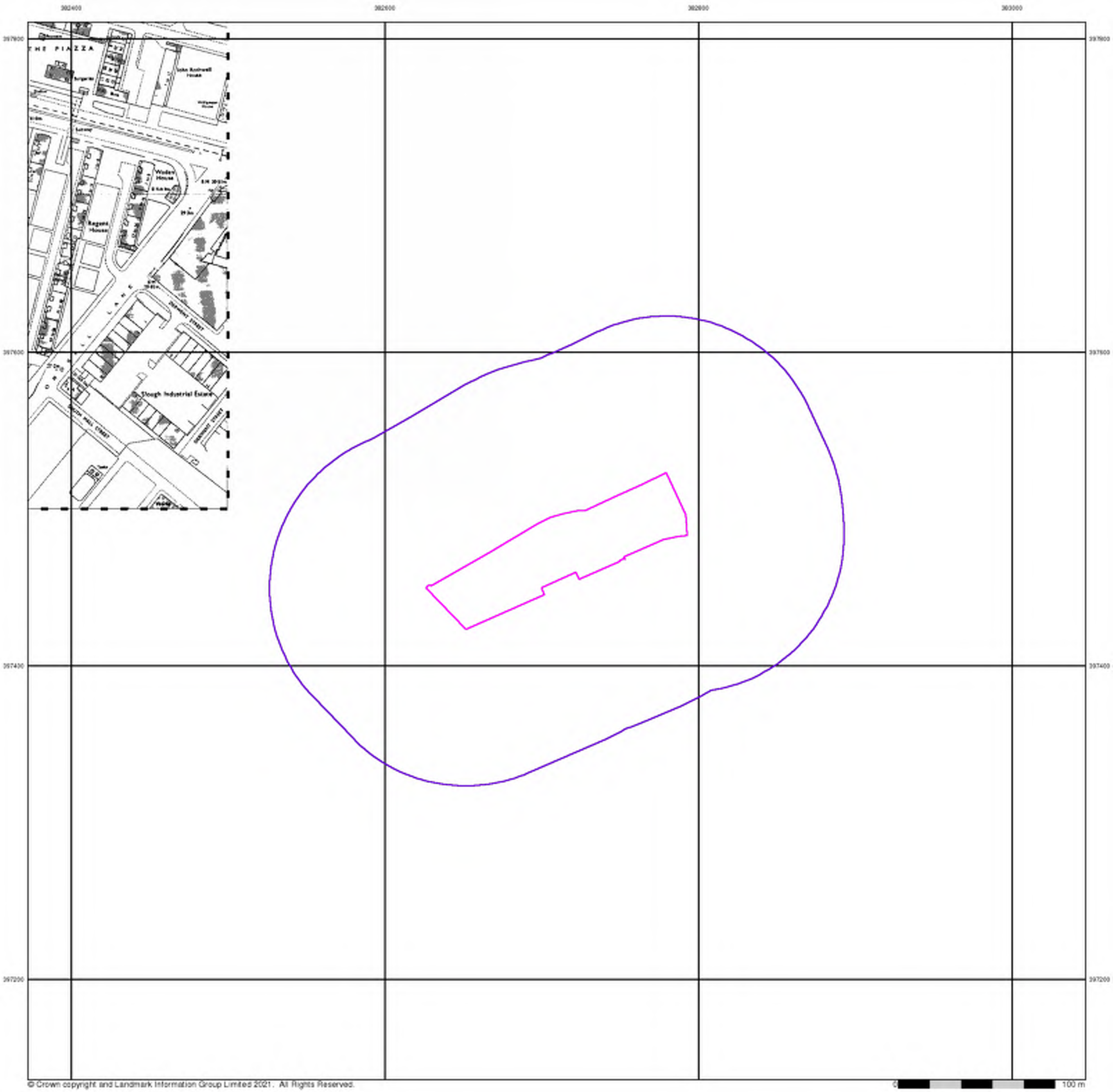


Order Details

Order Number: 272481752_1_1
Customer Ref: 077442
National Grid Reference: 382710, 397470
Slice: A
Site Area (Ha): 0.64
Search Buffer (m): 100

Site Details

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MANCHESTER, M15 4NU



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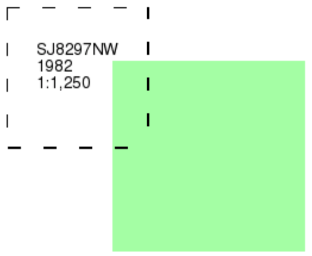
Ordnance Survey Plan

Published 1982

Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A13





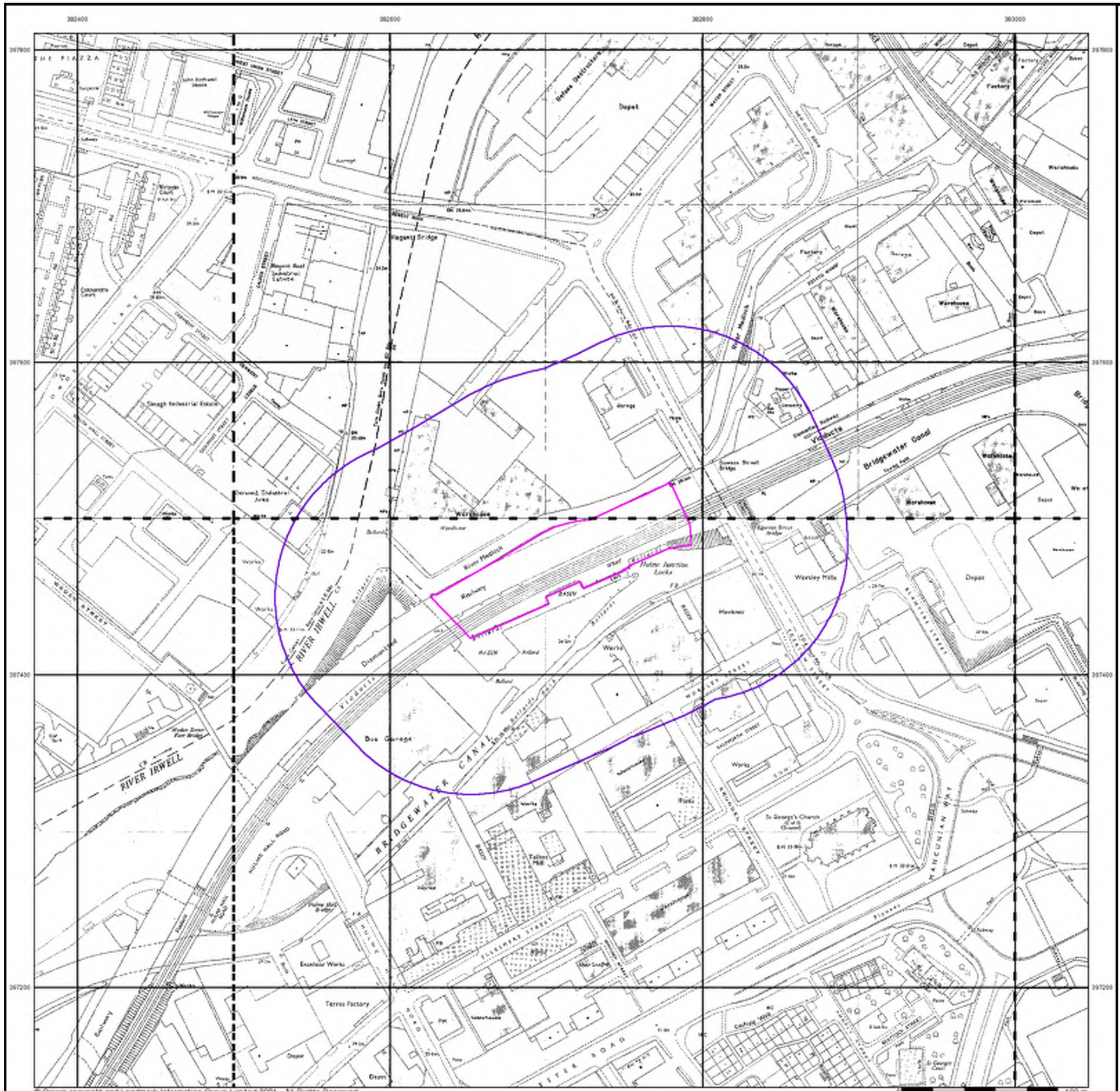
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Additional SIMs

Published 1984 - 1990

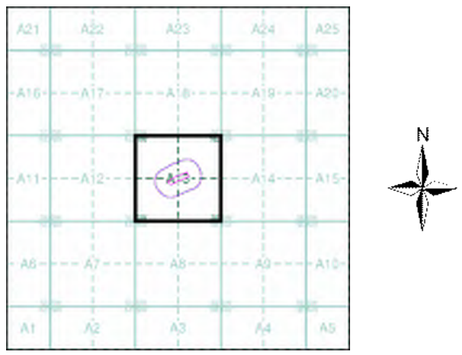
Source map scale - 1:1,250

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Map Name(s) and Date(s)

SJ8297NW 1985 1:1,250	SJ8297NE 1986 1:1,250	SJ8397NW 1986 1:1,250
SJ8297SW 1990 1:1,250	SJ8297SE 1984 1:1,250	SJ8397SW 1990 1:1,250

Historical Map - Segment A13



Order Details

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Site Details

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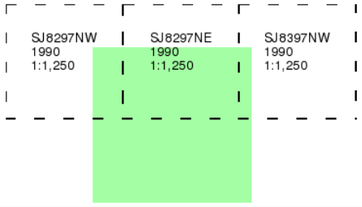
Additional SIMs

Published 1990

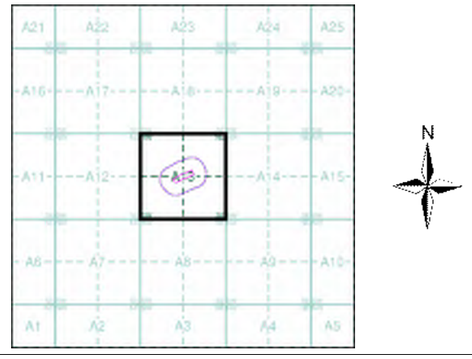
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A13



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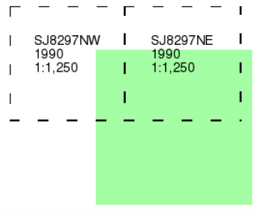
Additional SIMs

Published 1990

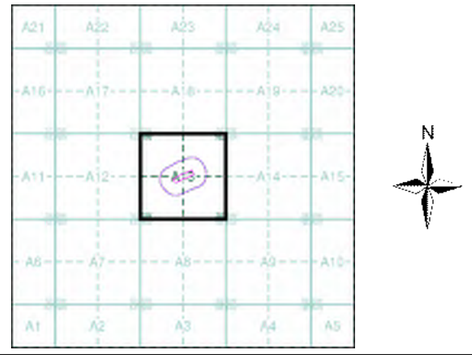
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

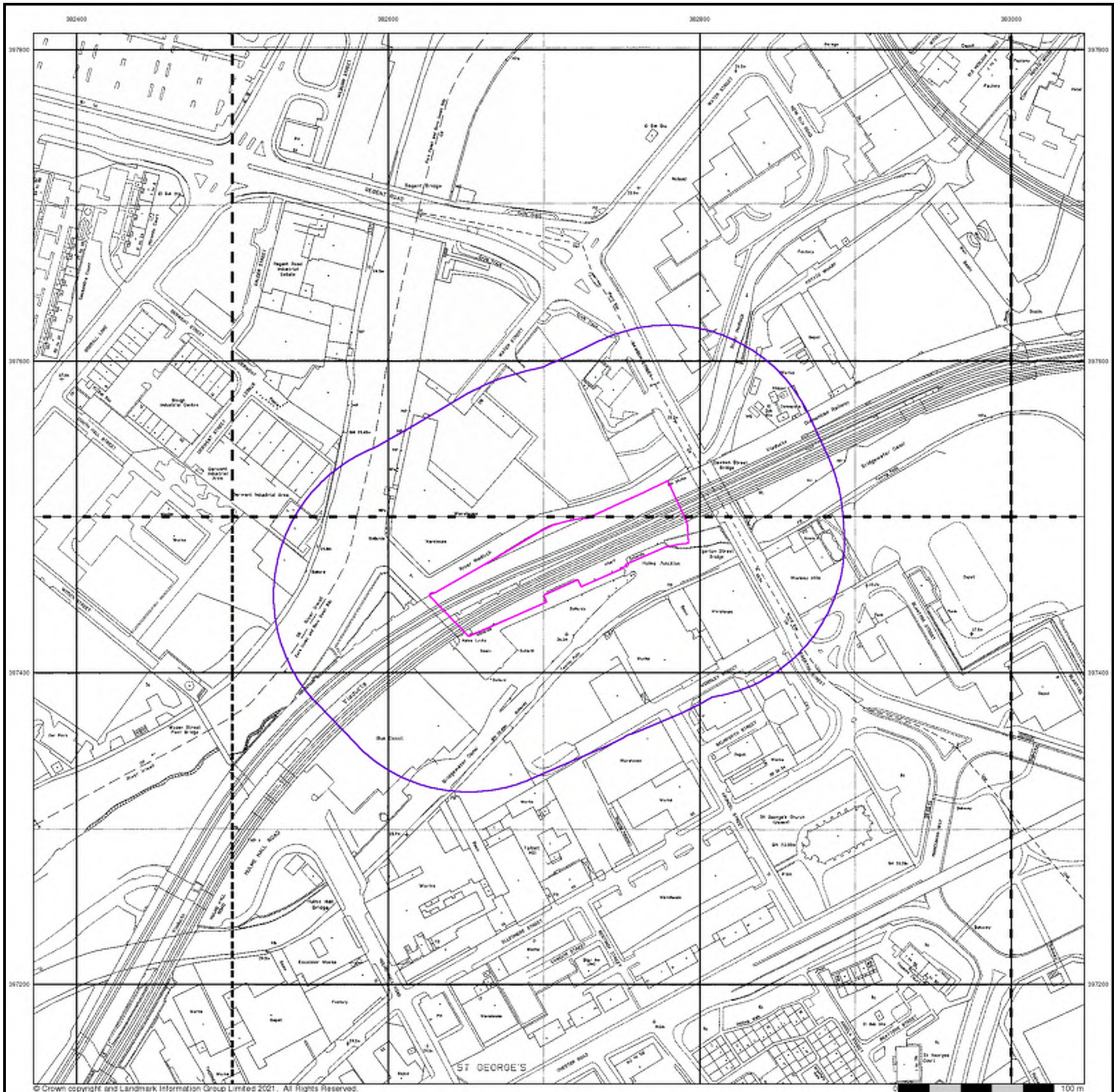
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Large-Scale National Grid Data

Published 1992

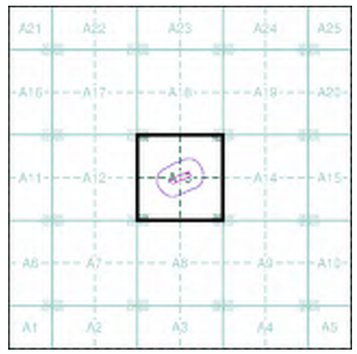
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SJ8297NW 1992 1:1,250	SJ8297NE 1992 1:1,250	SJ8397NW 1992 1:1,250
SJ8297SW 1992 1:1,250	SJ8297SE 1992 1:1,250	SJ8397SW 1992 1:1,250

Historical Map - Segment A13

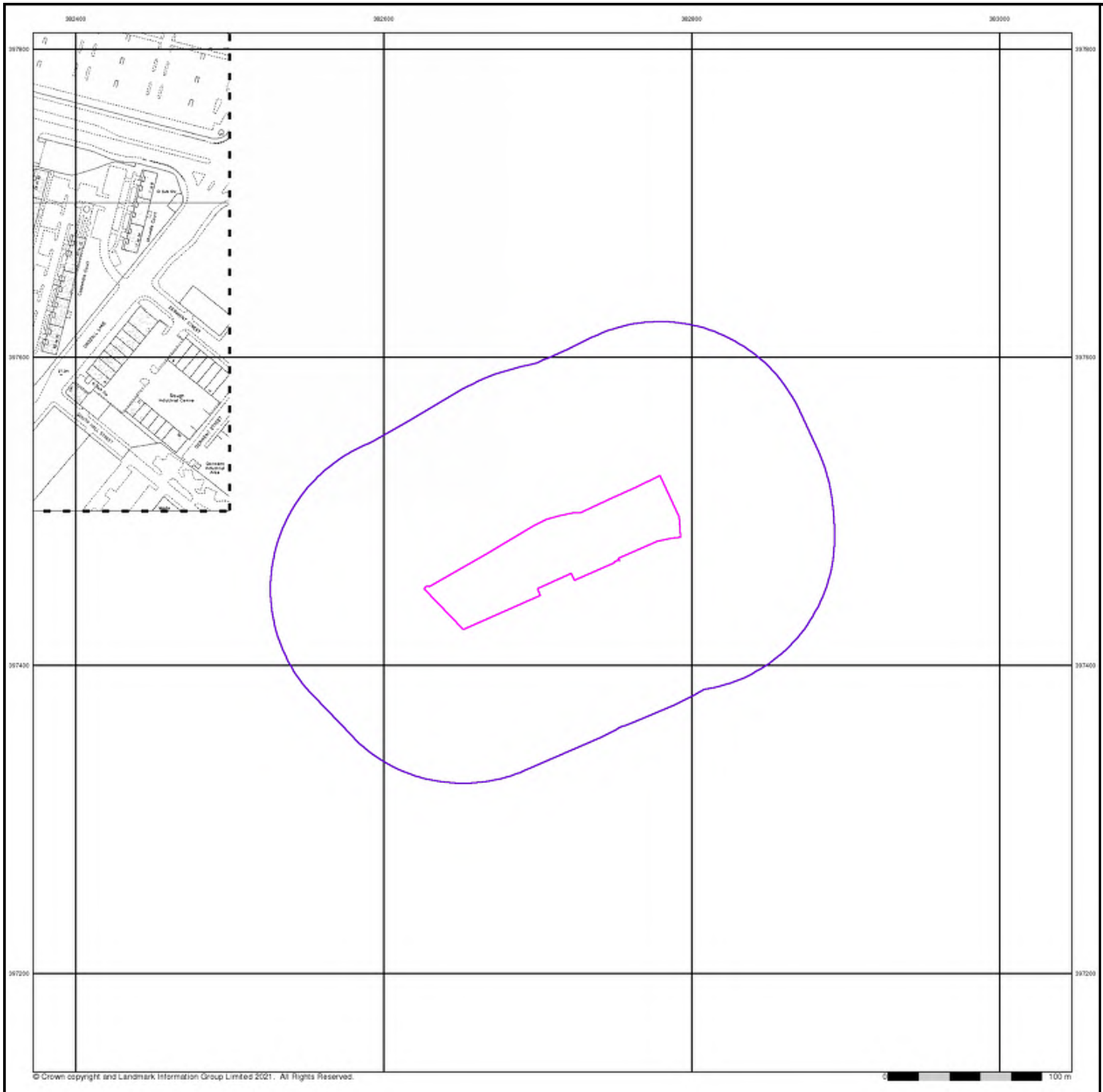


Order Details

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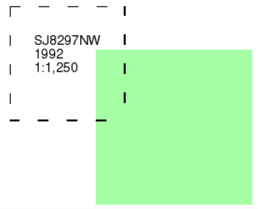
Additional SIMs

Published 1992

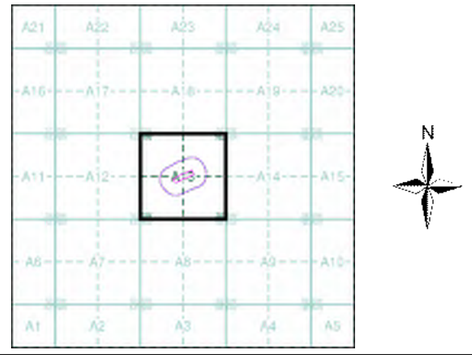
Source map scale - 1:1,250

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

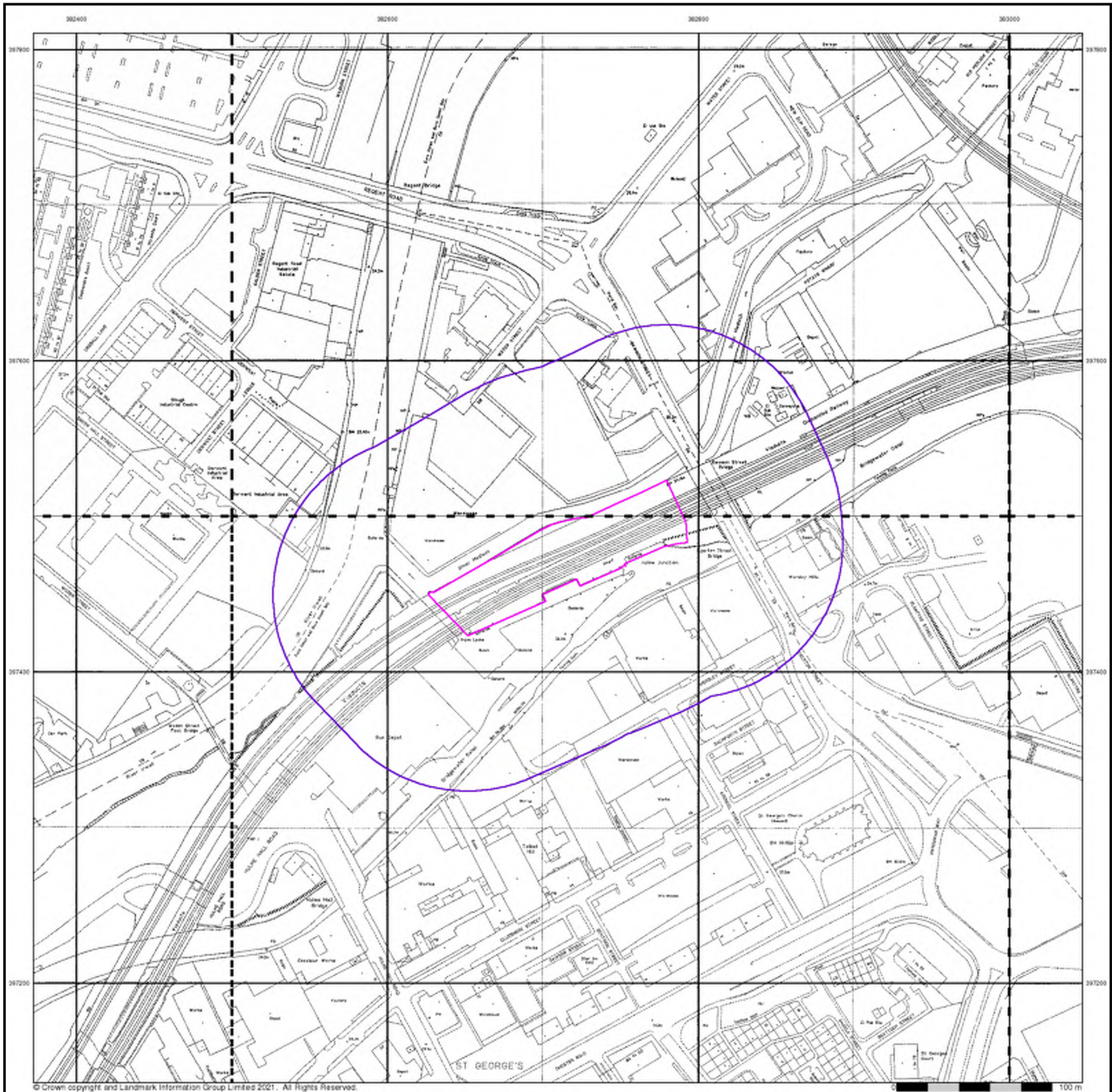
Order Number:	272481752_1_1
Customer Ref:	077442
National Grid Reference:	382710, 397470
Slice:	A
Site Area (Ha):	0.64
Search Buffer (m):	100

Site Details

Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU

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Large-Scale National Grid Data

Published 1993 - 1995

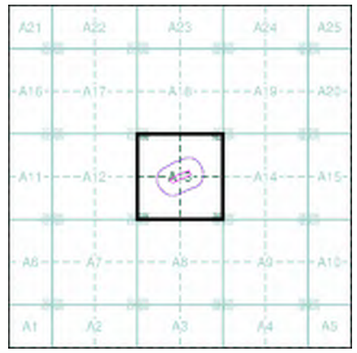
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SJ8297NW 1995 1:1,250	SJ8297NE 1993 1:1,250	SJ8397NW 1994 1:1,250
SJ8297SW 1993 1:1,250	SJ8297SE 1995 1:1,250	SJ8397SW 1995 1:1,250

Historical Map - Segment A13



Order Details

Order Number:	272481752_1_1
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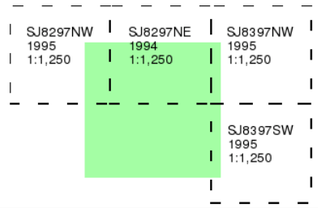
Large-Scale National Grid Data

Published 1994 - 1995

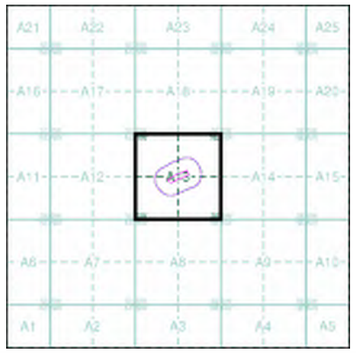
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



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Site Details

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Large-Scale National Grid Data

Published 1995

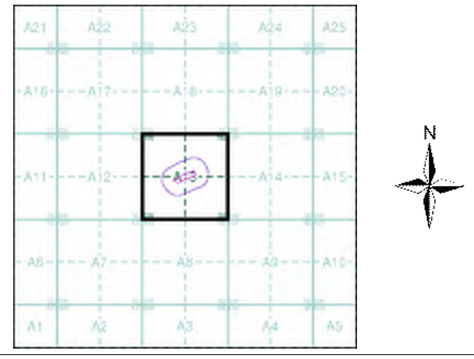
Source map scale - 1:1,250

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Map Name(s) and Date(s)

SJ8297NE
1995
1:1,250

Historical Map - Segment A13



Order Details

Order Number:	272481752_1_1
Customer Ref:	077442
National Grid Reference:	382710, 397470
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Large-Scale National Grid Data

Published 1995

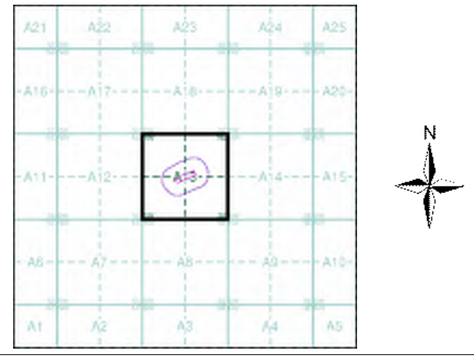
Source map scale - 1:1,250

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)

SJ8297NE
1995
1:1,250

Historical Map - Segment A13



Order Details

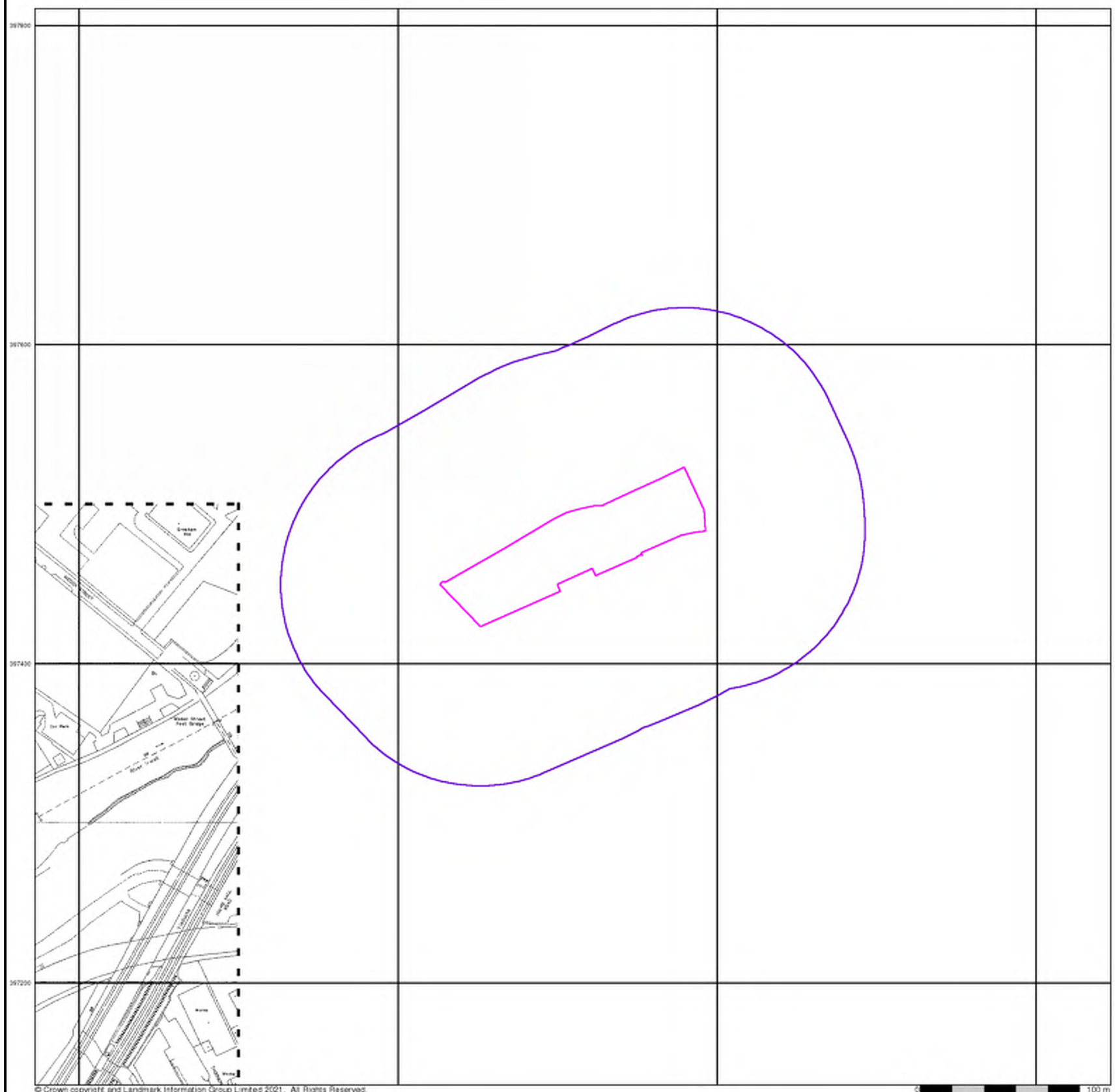
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0 100 m

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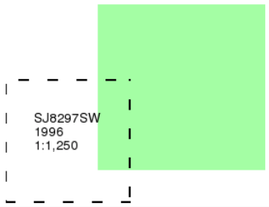
Large-Scale National Grid Data

Published 1996

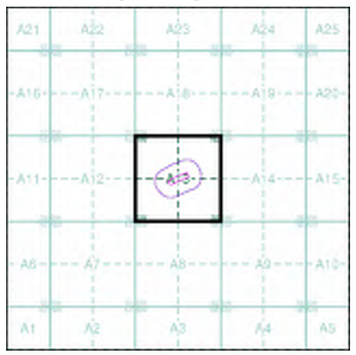
Source map scale - 1:1,250

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Map Name(s) and Date(s)



Historical Map - Segment A13

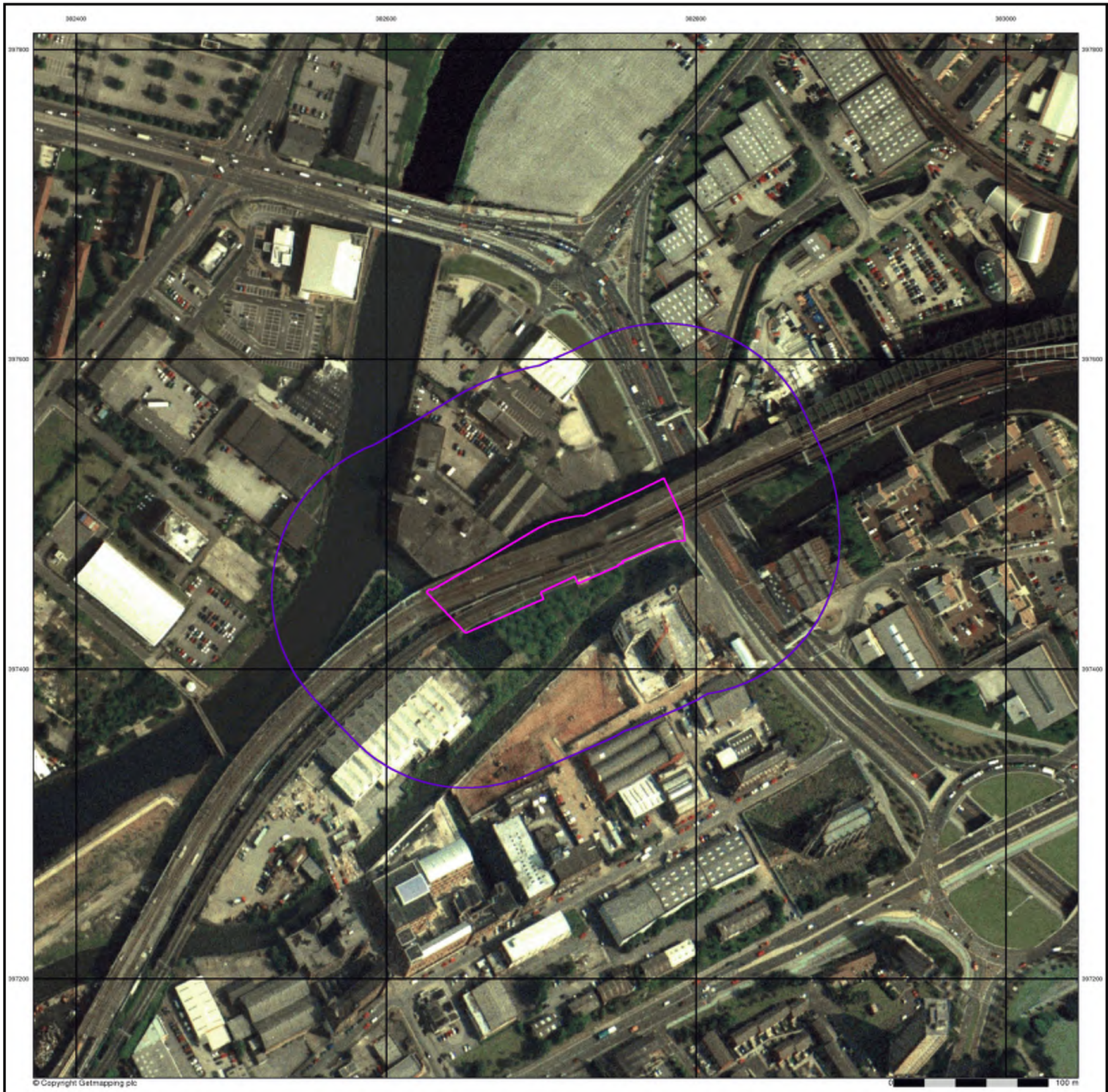


Order Details

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Site Details

Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU



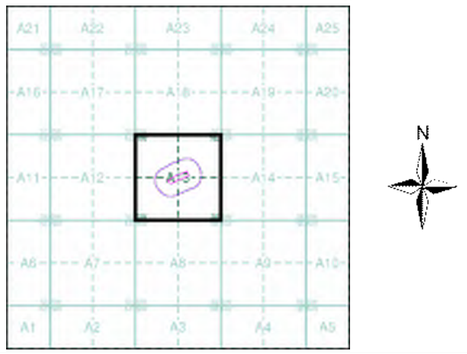
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Historical Aerial Photography

Published 2000

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Segment A13



Order Details

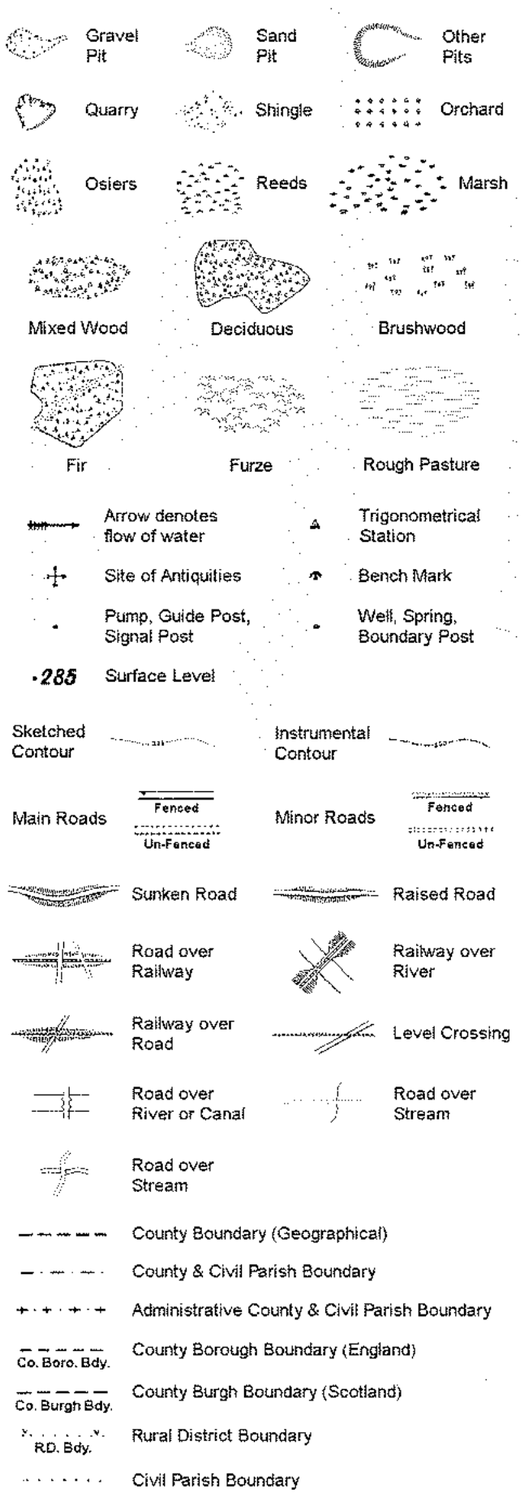
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National Grid Reference:	382710, 397470
Slice:	A
Site Area (Ha):	0.64
Search Buffer (m):	100

Site Details

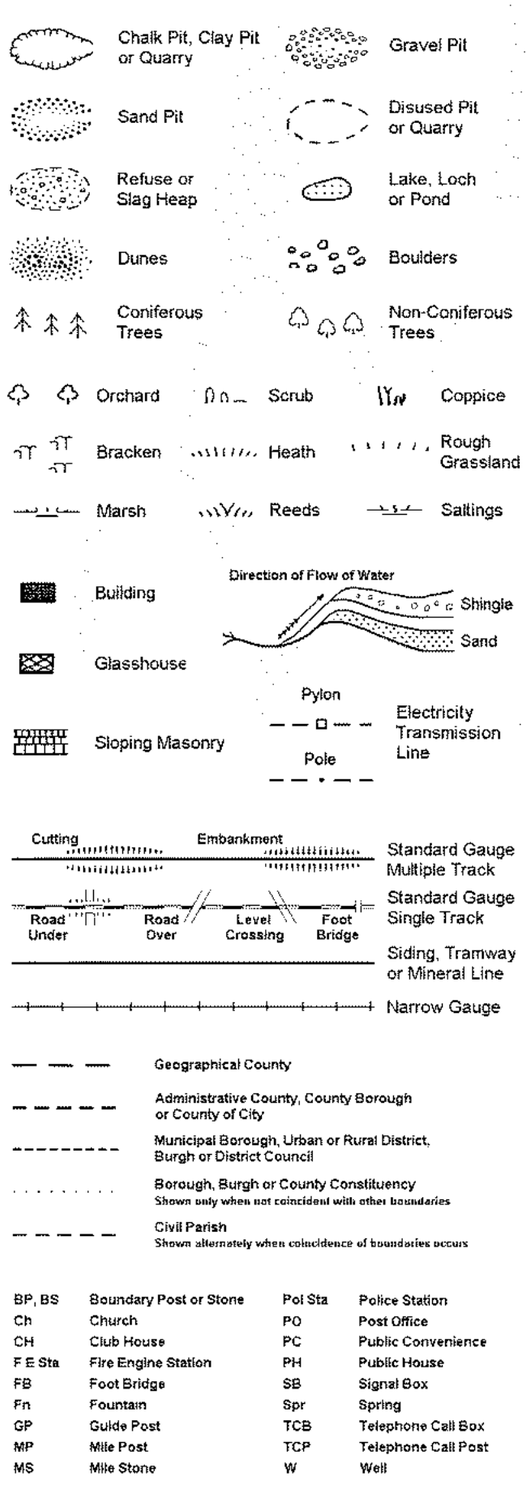
Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU

Historical Mapping Legends

Ordnance Survey County Series 1:10,560

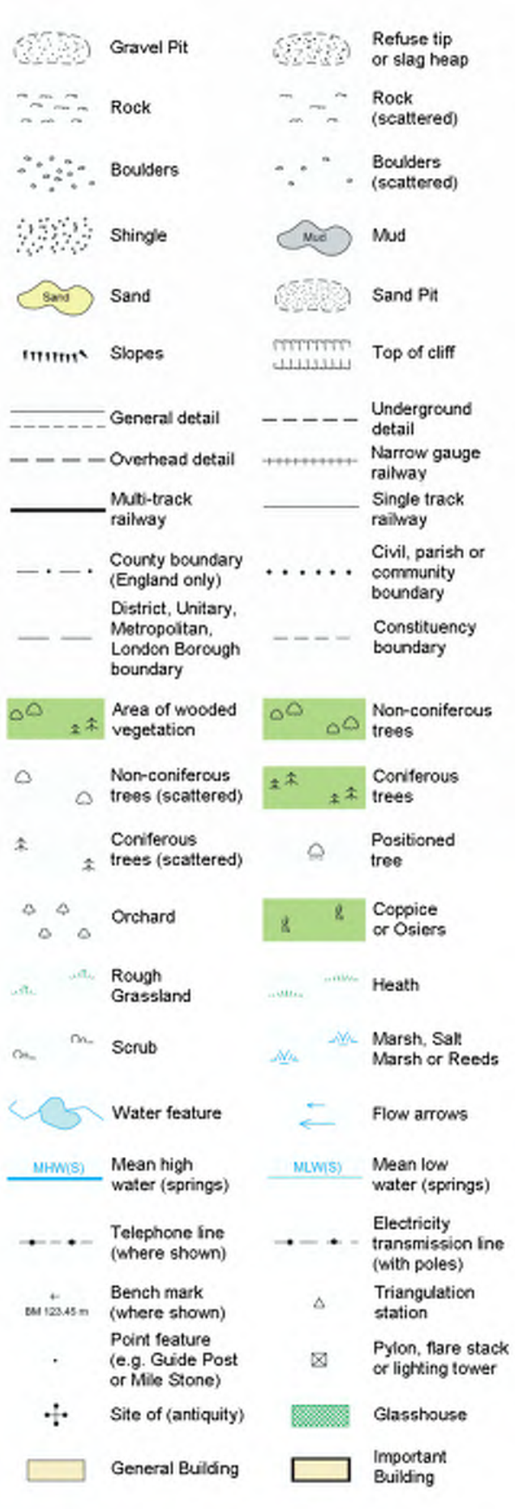


Ordnance Survey Plan 1:10,000



BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

1:10,000 Raster Mapping

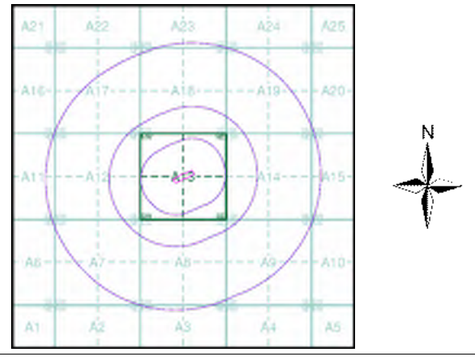


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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:10,560	1848	3
Cheshire	1:10,560	1882	4
Lancashire And Furness	1:10,560	1894 - 1896	5
Cheshire	1:10,560	1899	6
Lancashire And Furness	1:10,560	1909	7
Cheshire	1:10,560	1911	8
Lancashire And Furness	1:10,560	1923	9
Lancashire And Furness	1:10,560	1931 - 1932	10
Cheshire	1:10,560	1938	11
Lancashire And Furness	1:10,560	1938	12
Ordnance Survey Plan	1:10,000	1956	13
Ordnance Survey Plan	1:10,000	1972	14
Manchester	1:25,000	1975	15
Ordnance Survey Plan	1:10,000	1980	16
Ordnance Survey Plan	1:10,000	1985	17
Ordnance Survey Plan	1:10,000	1989	18
Ordnance Survey Plan	1:10,000	1994	19
10K Raster Mapping	1:10,000	1999	20
10K Raster Mapping	1:10,000	2006	21
VectorMap Local	1:10,000	2020	22

Historical Map - Slice A



Order Details

Order Number: 272481752_1_1
Customer Ref: 077442
National Grid Reference: 382710, 397470
Slice: A
Site Area (Ha): 0.64
Search Buffer (m): 1000

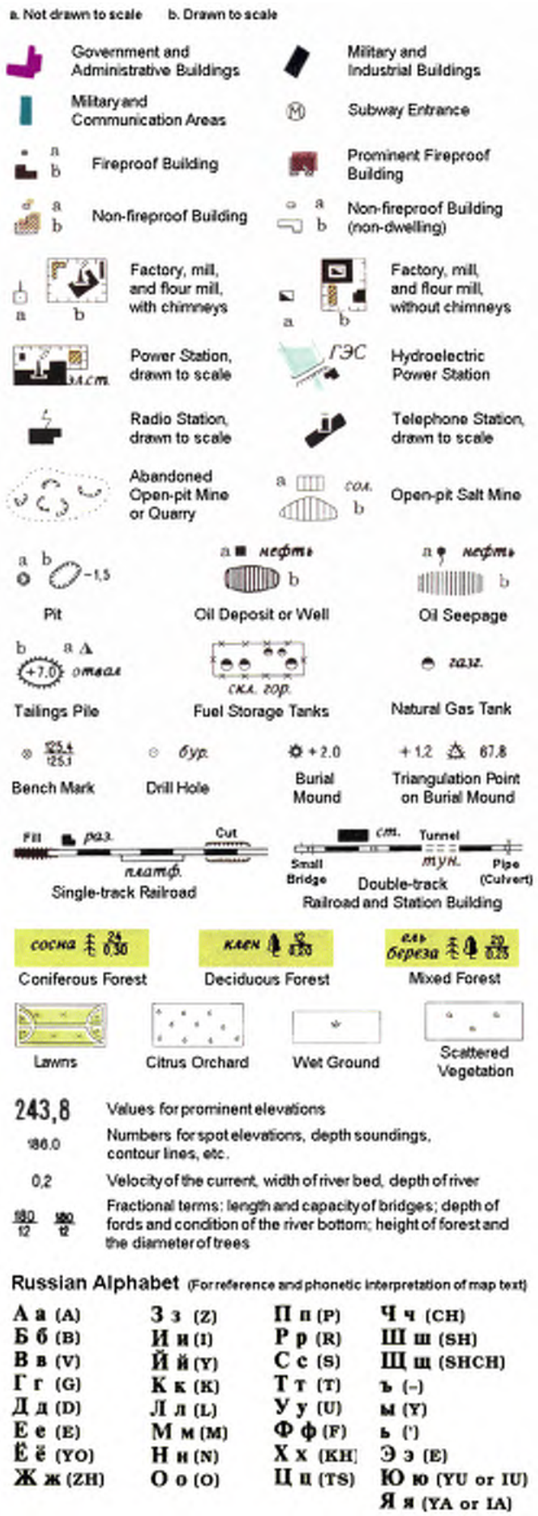
Site Details

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Russian Military Mapping Legends

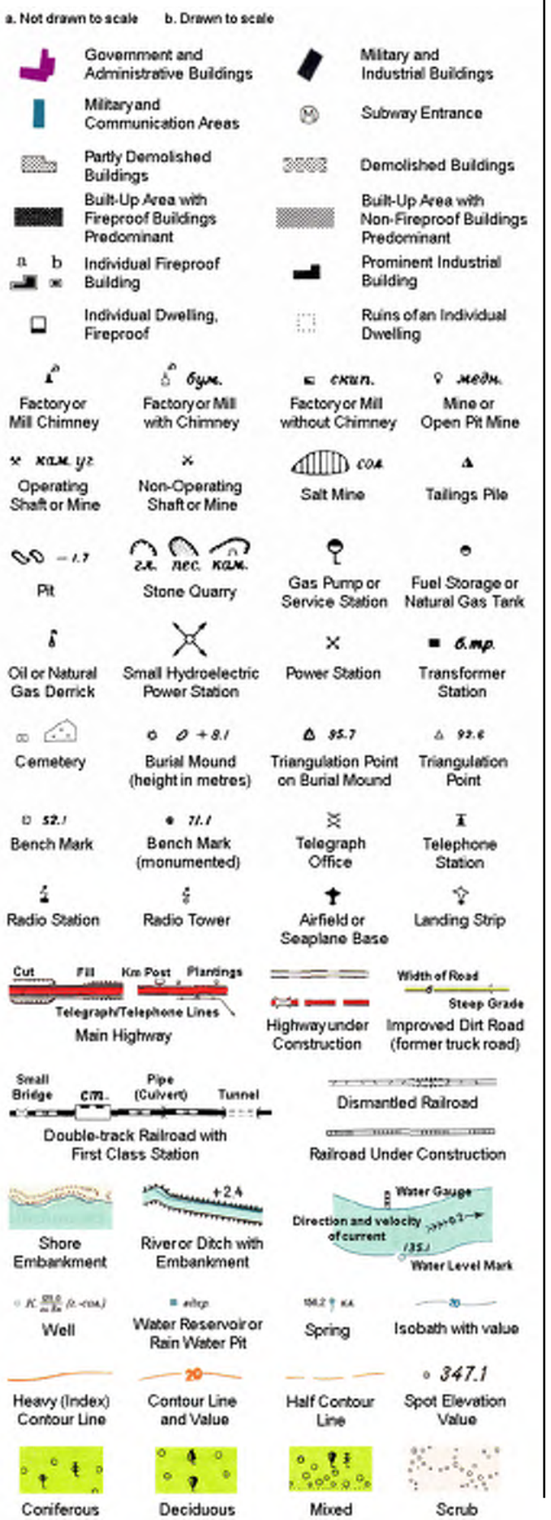
1:5,000 and 1:10,000 mapping



Russian Alphabet (For reference and phonetic interpretation of map text)

А а (A)	З з (Z)	П п (P)	Ч ч (CH)
Б б (B)	И и (I)	Р р (R)	Ш ш (SH)
В в (V)	Й й (Y)	С с (S)	Щ щ (SHCH)
Г г (G)	К к (K)	Т т (T)	ъ (-)
Д д (D)	Л л (L)	У у (U)	ы (Y)
Е е (E)	М м (M)	Ф ф (F)	ь (')
Ё ё (YO)	Н н (N)	Х х (KH)	Э э (E)
Ж ж (ZH)	О о (O)	Ц ц (TS)	Ю ю (YU or IU)
			Я я (YA or IA)

1:25,000 mapping



Key to Numbers on Mapping

SJ89_Manchester

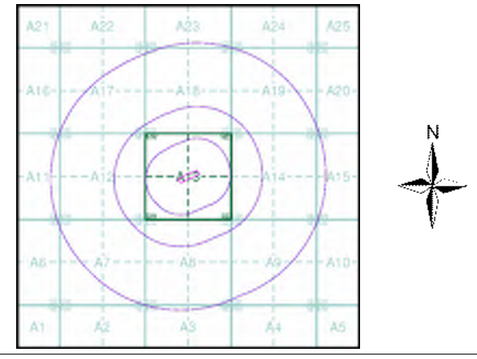
No.	Description
6	Railway Station
66	Factory (Gas)
94	Factory (Metal Works)
158	Police Station/Headquarters
195	Railway Station (Freight)
197	Railway Station
218	Factory (Use Unknown)

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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Lancashire And Furness	1:10,560	1848	3
Cheshire	1:10,560	1882	4
Lancashire And Furness	1:10,560	1894 - 1896	5
Cheshire	1:10,560	1899	6
Lancashire And Furness	1:10,560	1909	7
Cheshire	1:10,560	1911	8
Lancashire And Furness	1:10,560	1923	9
Lancashire And Furness	1:10,560	1931 - 1932	10
Cheshire	1:10,560	1938	11
Lancashire And Furness	1:10,560	1938	12
Ordnance Survey Plan	1:10,000	1956	13
Ordnance Survey Plan	1:10,000	1972	14
Manchester	1:25,000	1975	15
Ordnance Survey Plan	1:10,000	1980	16
Ordnance Survey Plan	1:10,000	1985	17
Ordnance Survey Plan	1:10,000	1989	18
Ordnance Survey Plan	1:10,000	1994	19
10K Raster Mapping	1:10,000	1999	20
10K Raster Mapping	1:10,000	2006	21
VectorMap Local	1:10,000	2020	22

Russian Map - Slice A



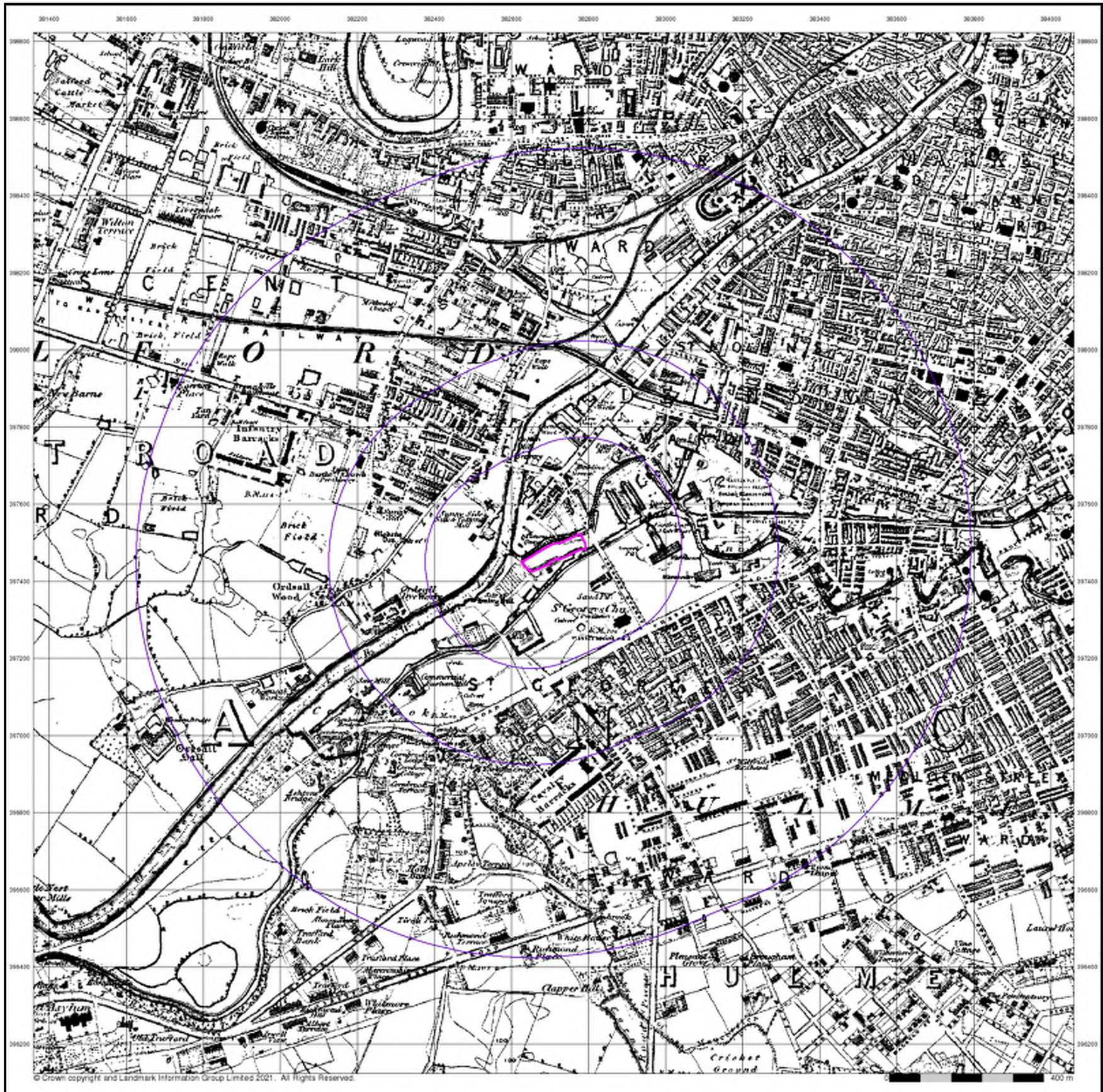
Order Details

Order Number: 272481752_1_1
Customer Ref: 077442
National Grid Reference: 382710, 397470
Slice: A
Site Area (Ha): 0.64
Search Buffer (m): 1000

Site Details

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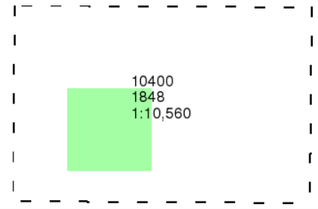
Lancashire And Furness

Published 1848

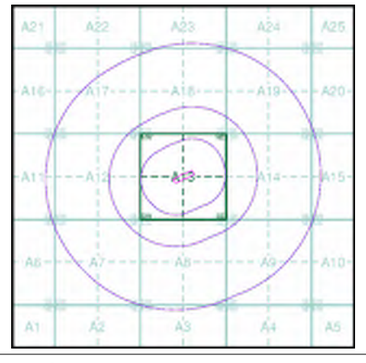
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

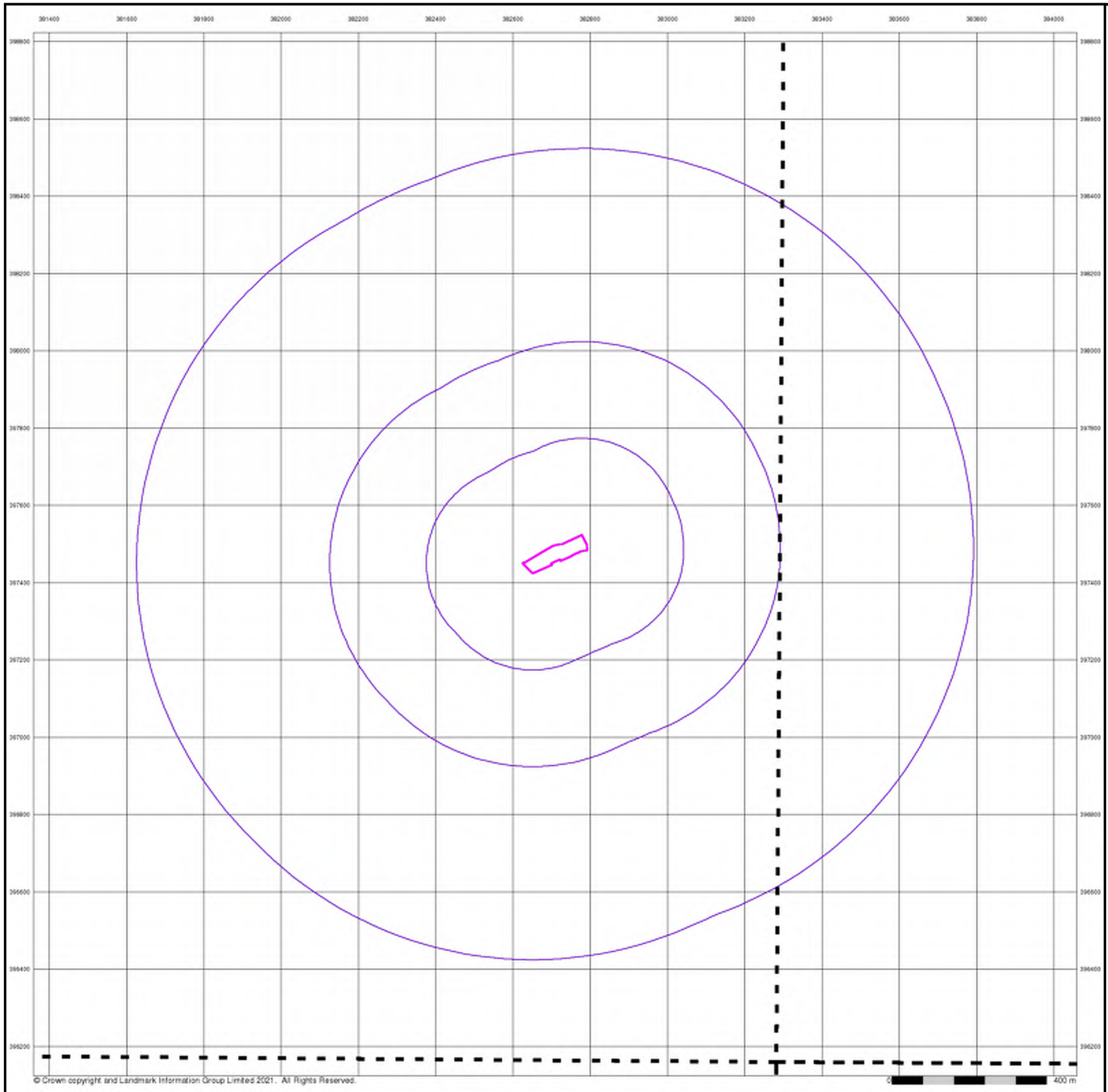
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Customer Ref:	077442
National Grid Reference:	382710, 397470
Slice:	A
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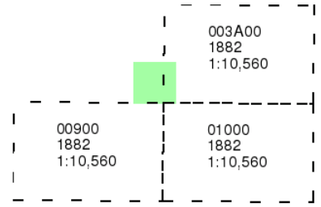
Cheshire

Published 1882

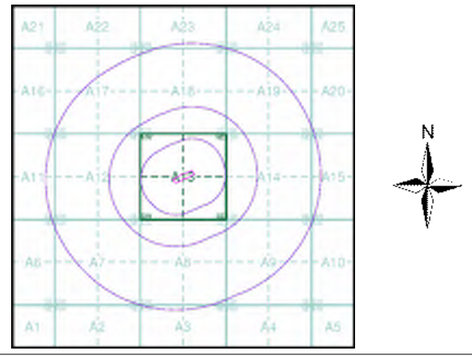
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



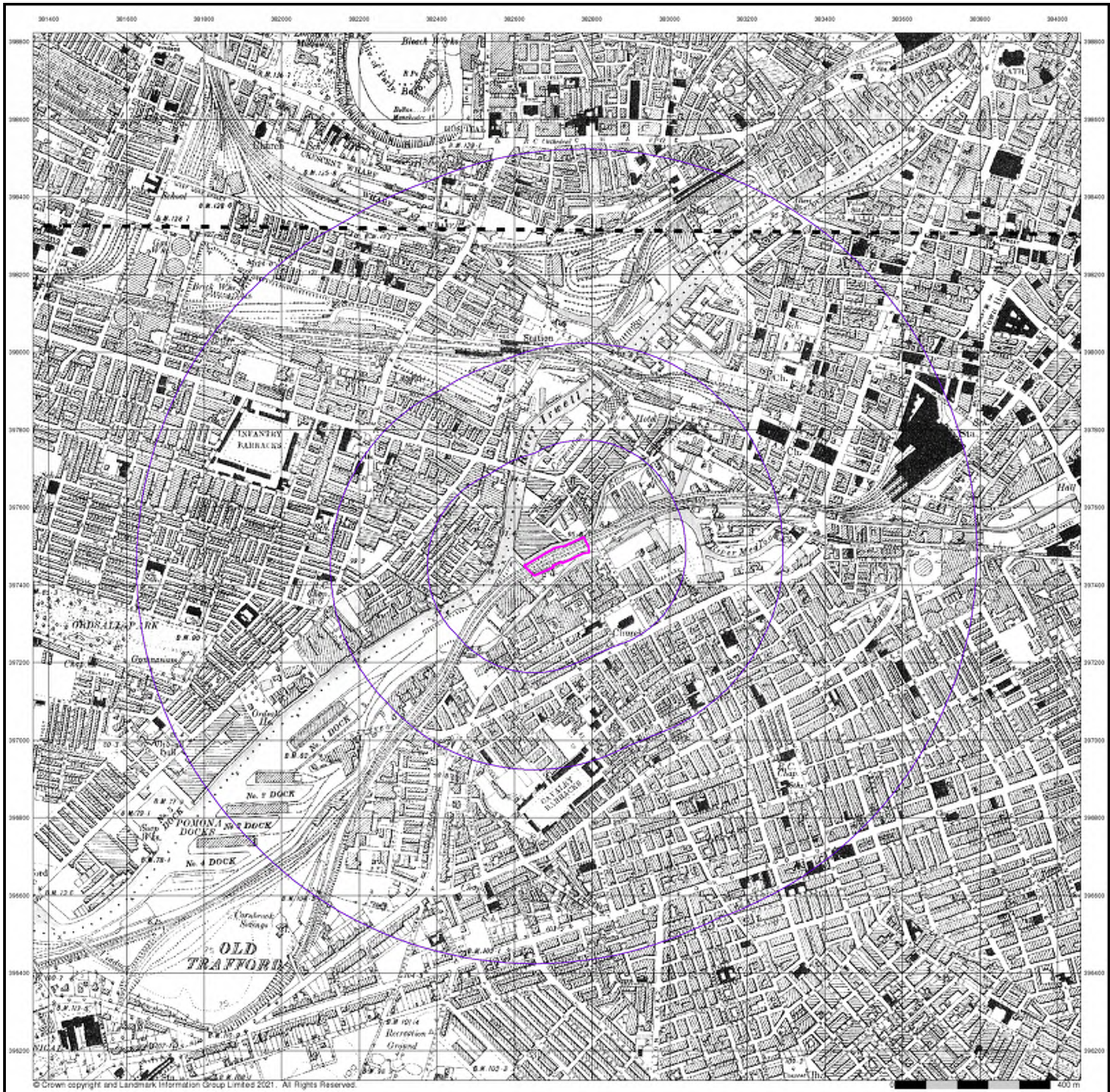
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Lancashire And Furness

Published 1894 - 1896

Source map scale - 1:10,560

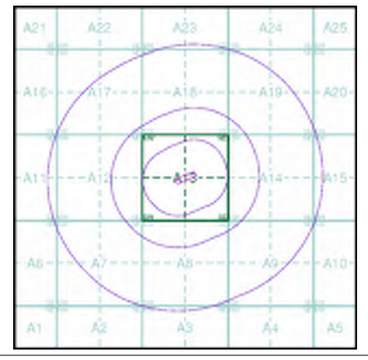
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

104NW
1894
1:10,560

104SW
1896
1:10,560

Historical Map - Slice A



Order Details

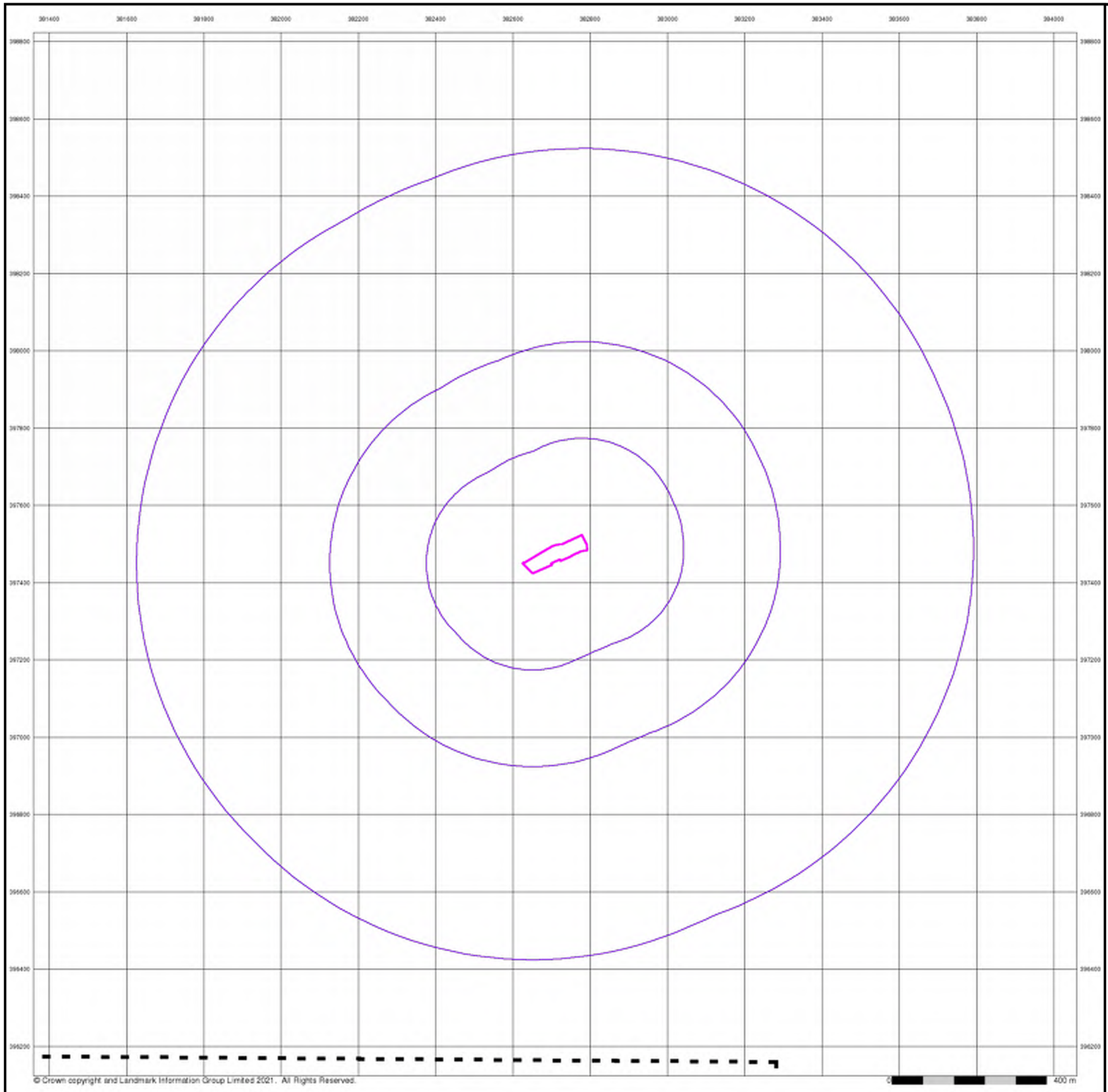
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Customer Ref:	077442
National Grid Reference:	382710, 397470
Slice:	A
Site Area (Ha):	0.64
Search Buffer (m):	1000

Site Details

Embassy Village Scheme, Dawson St, Castlefield, MANCHESTER, M15 4NU

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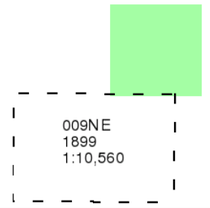
Cheshire

Published 1899

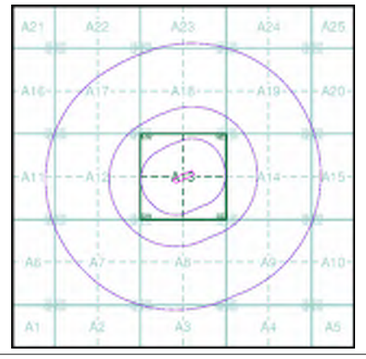
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

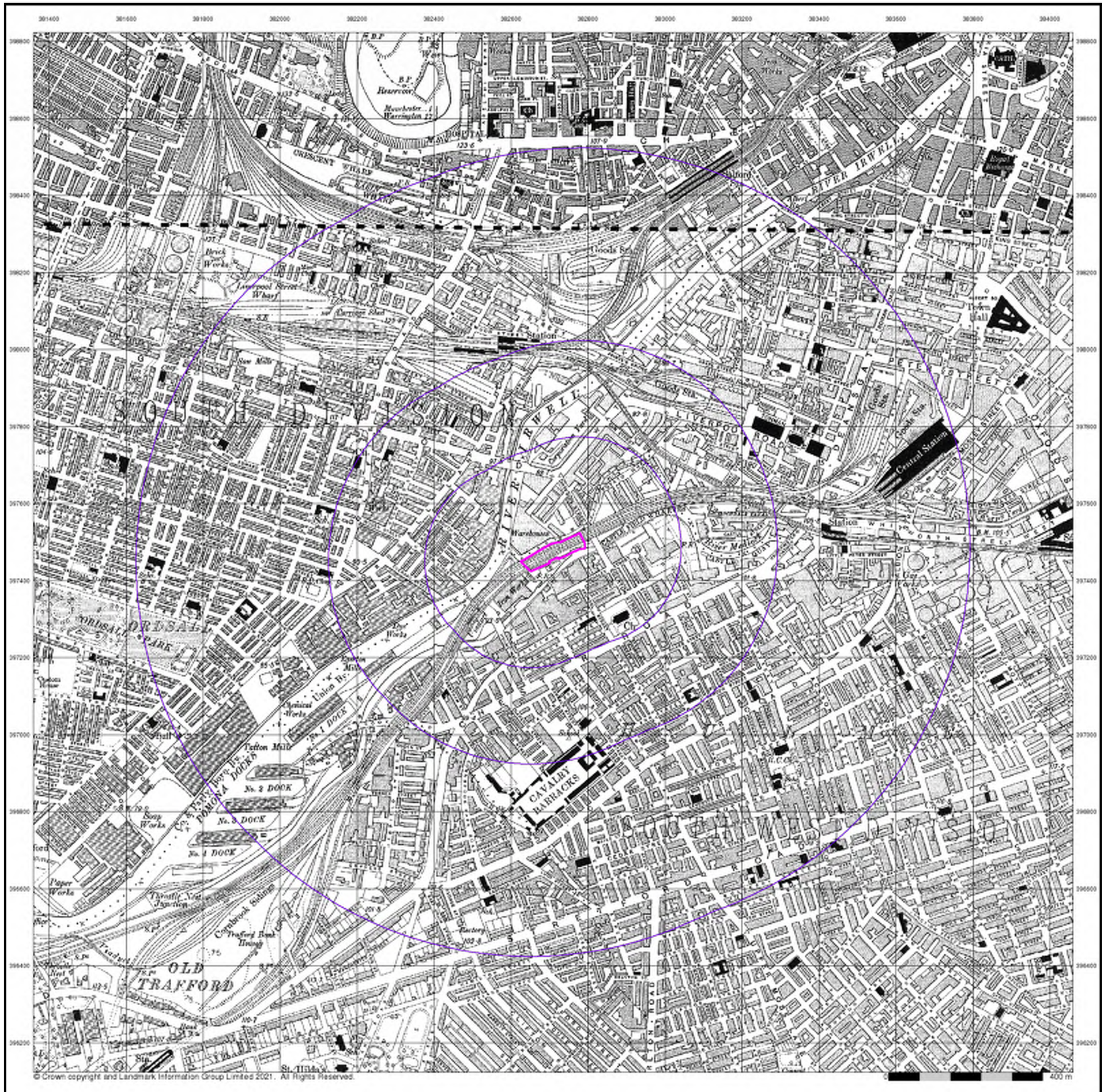
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Customer Ref:	077442
National Grid Reference:	382710, 397470
Slice:	A
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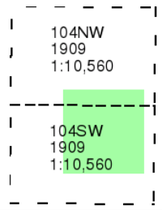
Lancashire And Furness

Published 1909

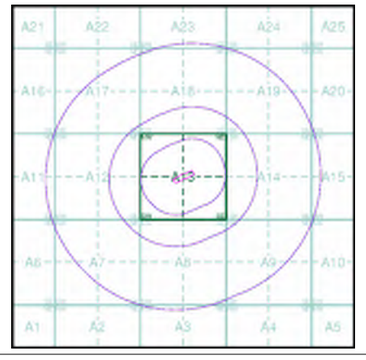
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A

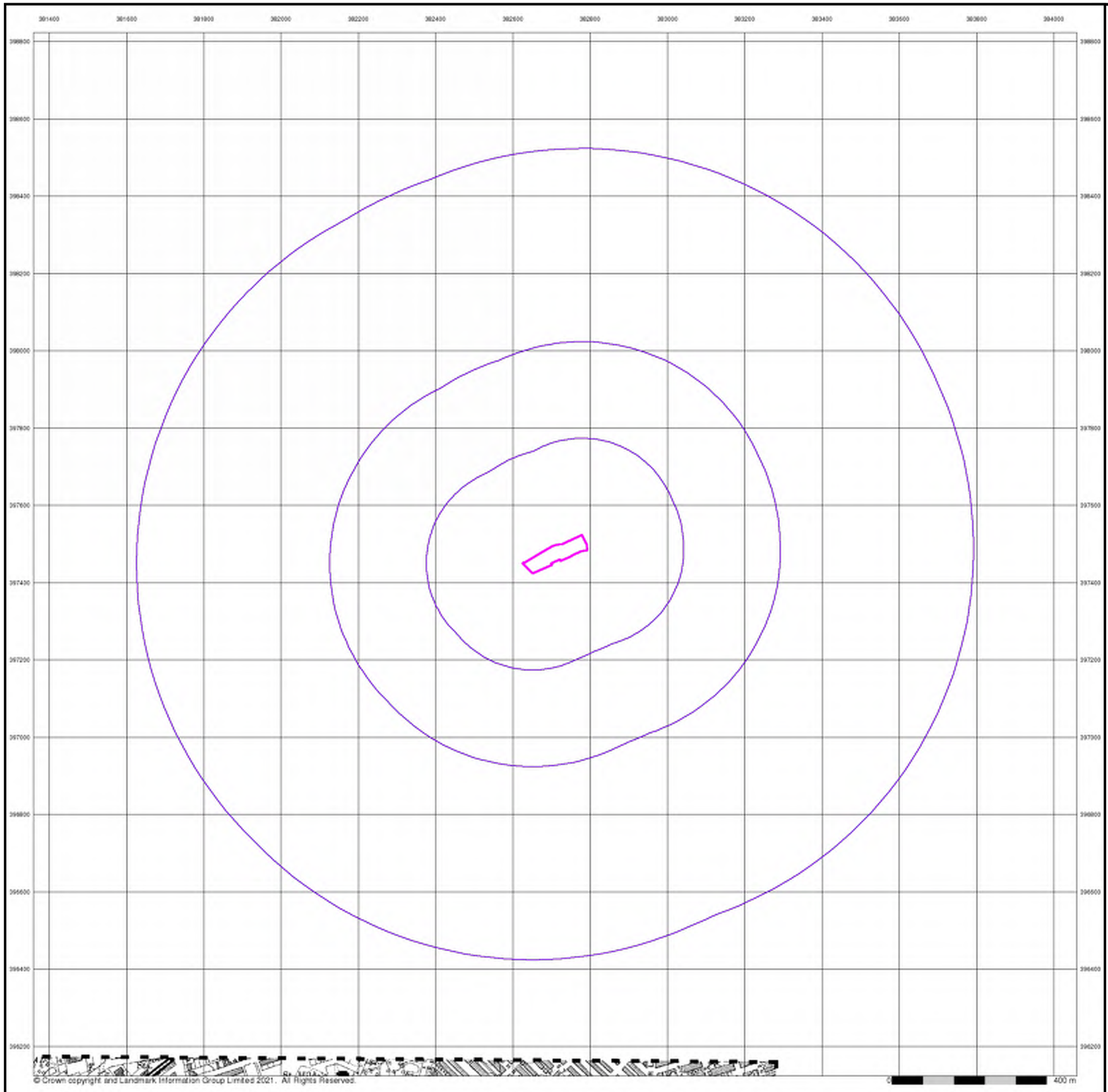


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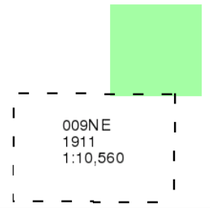
Cheshire

Published 1911

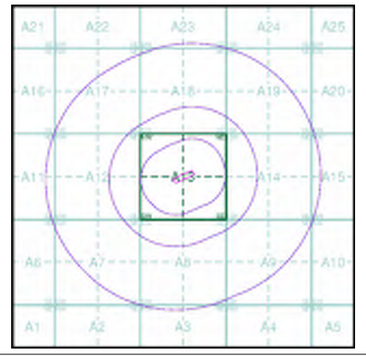
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

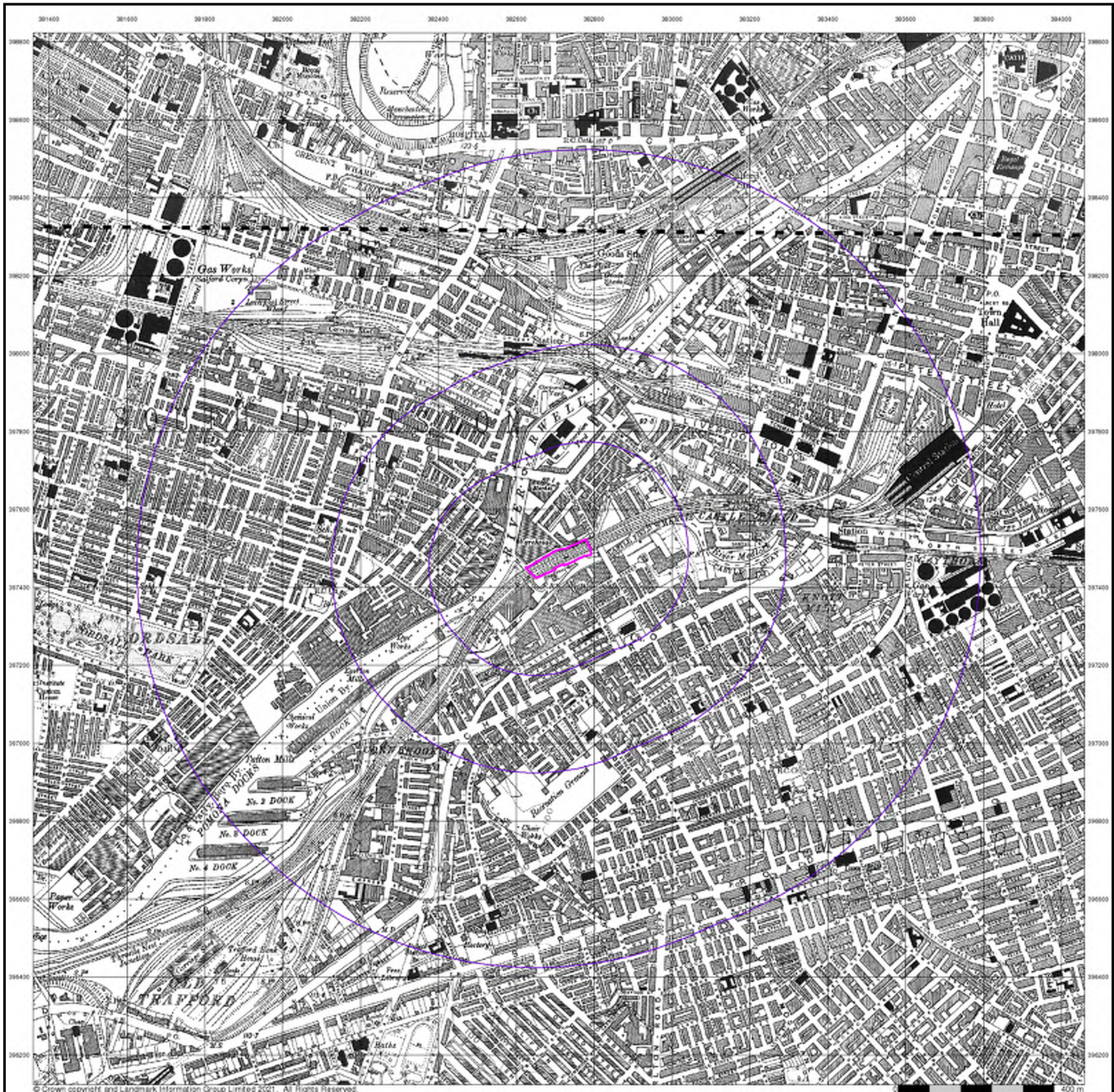
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Customer Ref:	077442
National Grid Reference:	382710, 397470
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Lancashire And Furness

Published 1923

Source map scale - 1:10,560

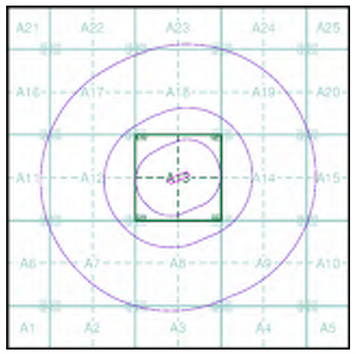
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Map Name(s) and Date(s)

104NW
1923
1:10,560

104SW
1923
1:10,560

Historical Map - Slice A



Order Details

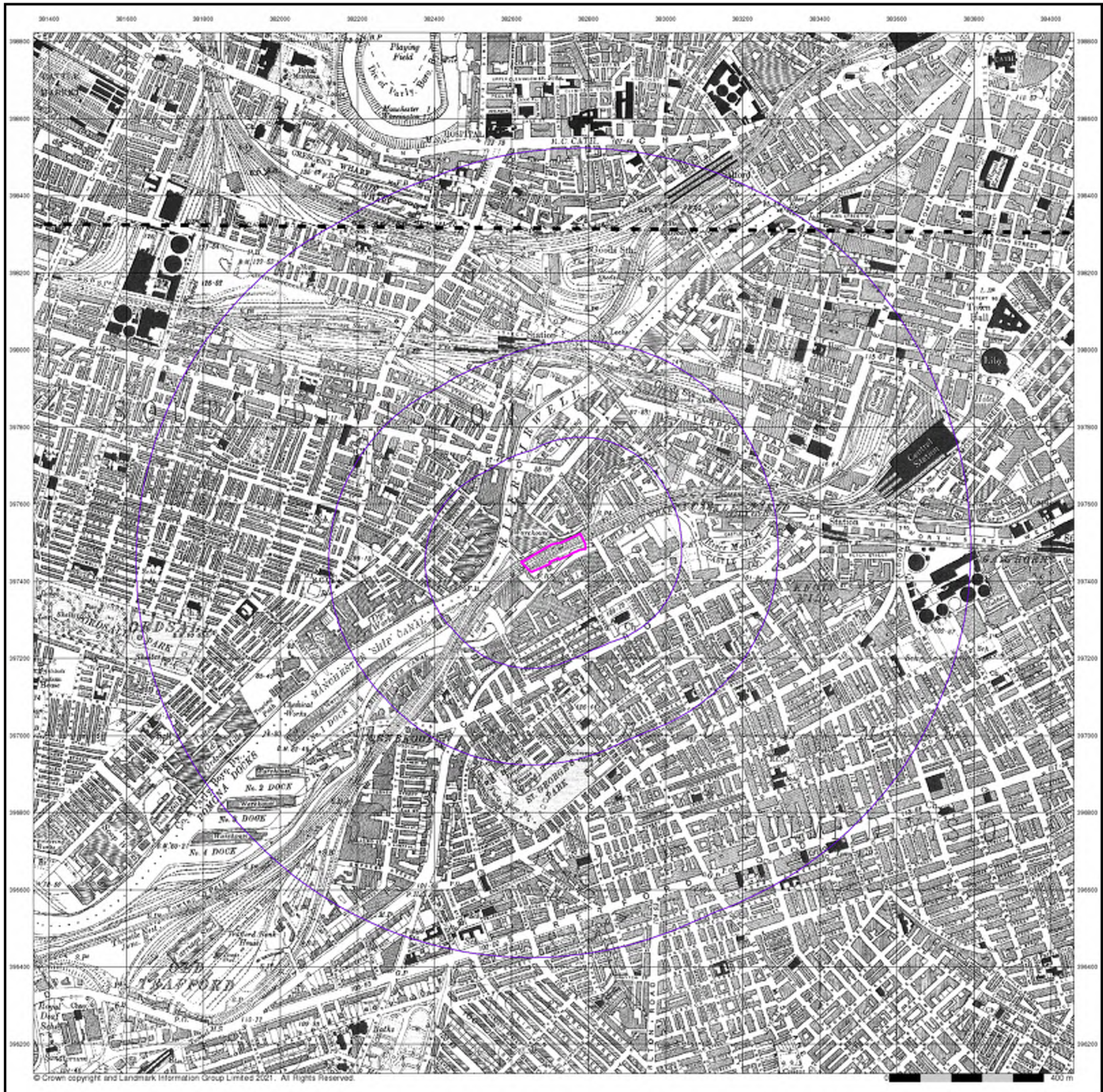
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400 m

Lancashire And Furness

Published 1931 - 1932

Source map scale - 1:10,560

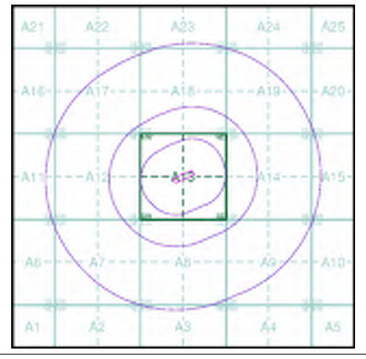
The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)

104NW
1931
1:10,560

104SW
1932
1:10,560

Historical Map - Slice A



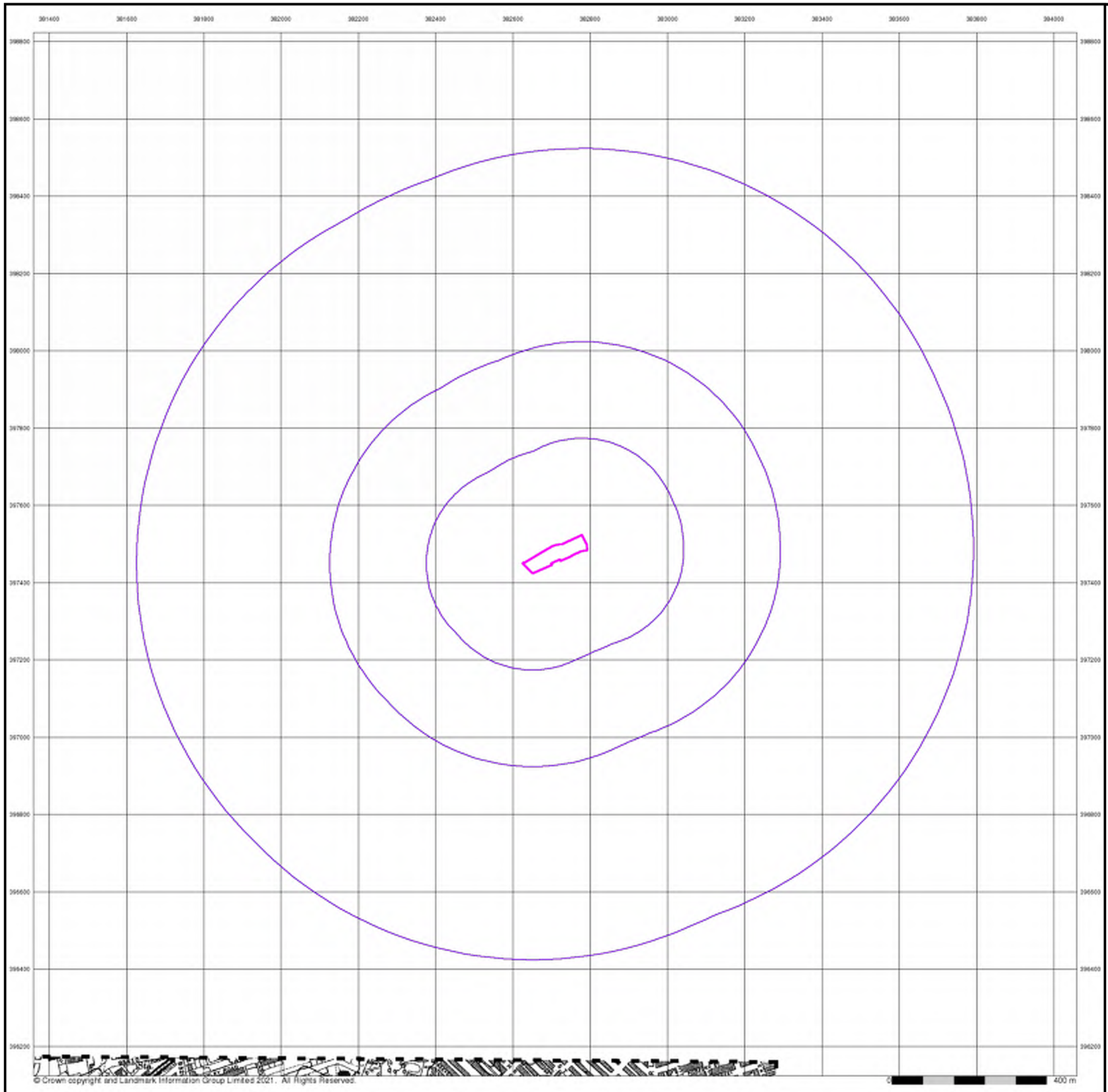
Order Details

Order Number:	272481752_1_1
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Slice:	A
Site Area (Ha):	0.64
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Site Details

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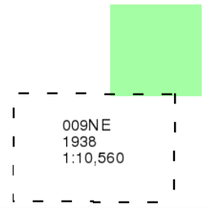
Cheshire

Published 1938

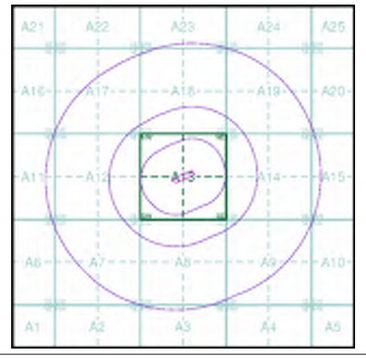
Source map scale - 1:10,560

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

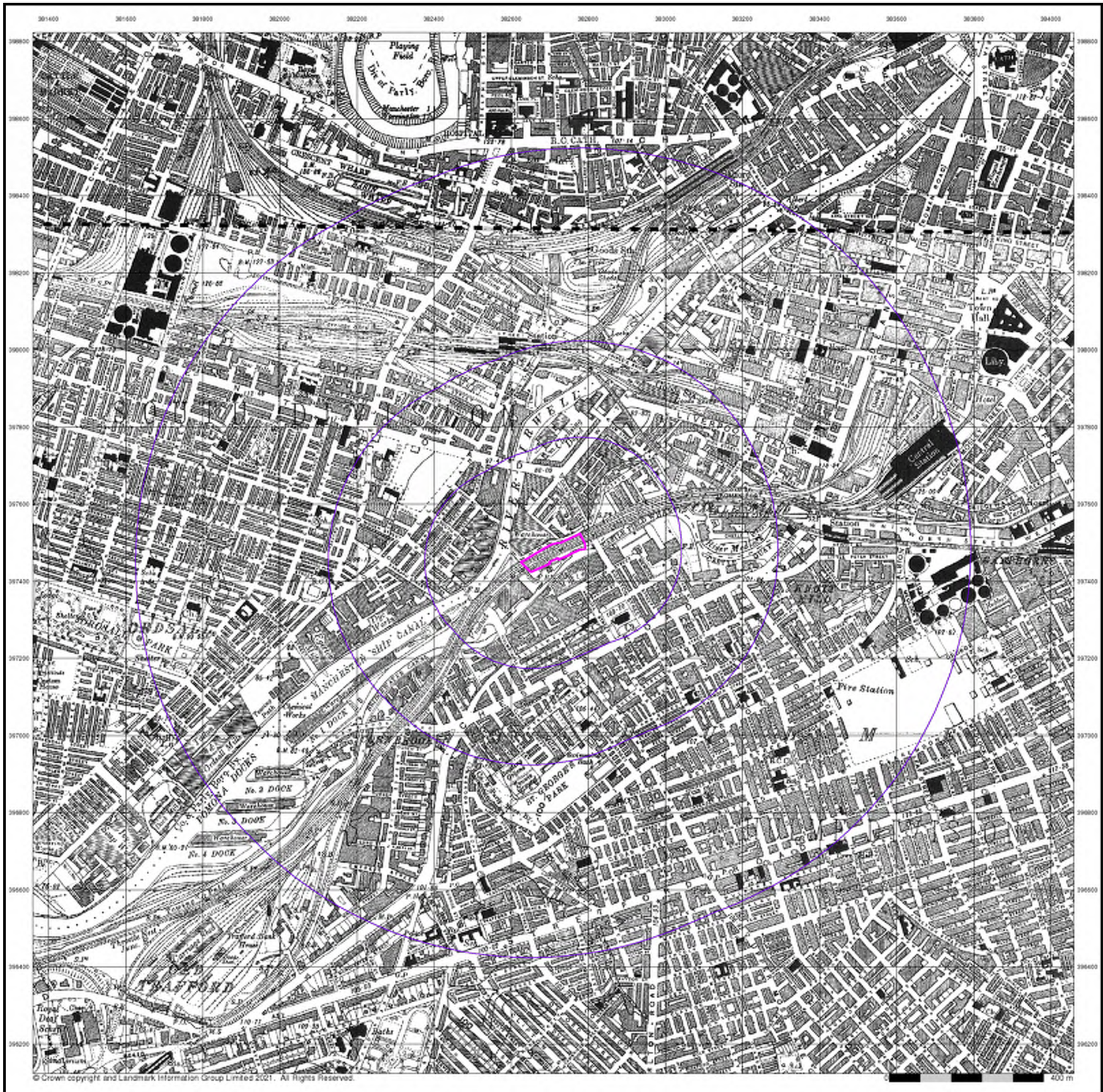
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Site Details

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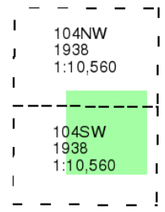
Lancashire And Furness

Published 1938

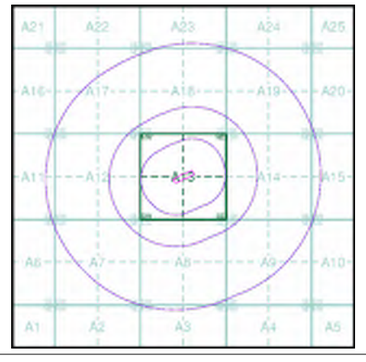
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Map Name(s) and Date(s)



Historical Map - Slice A



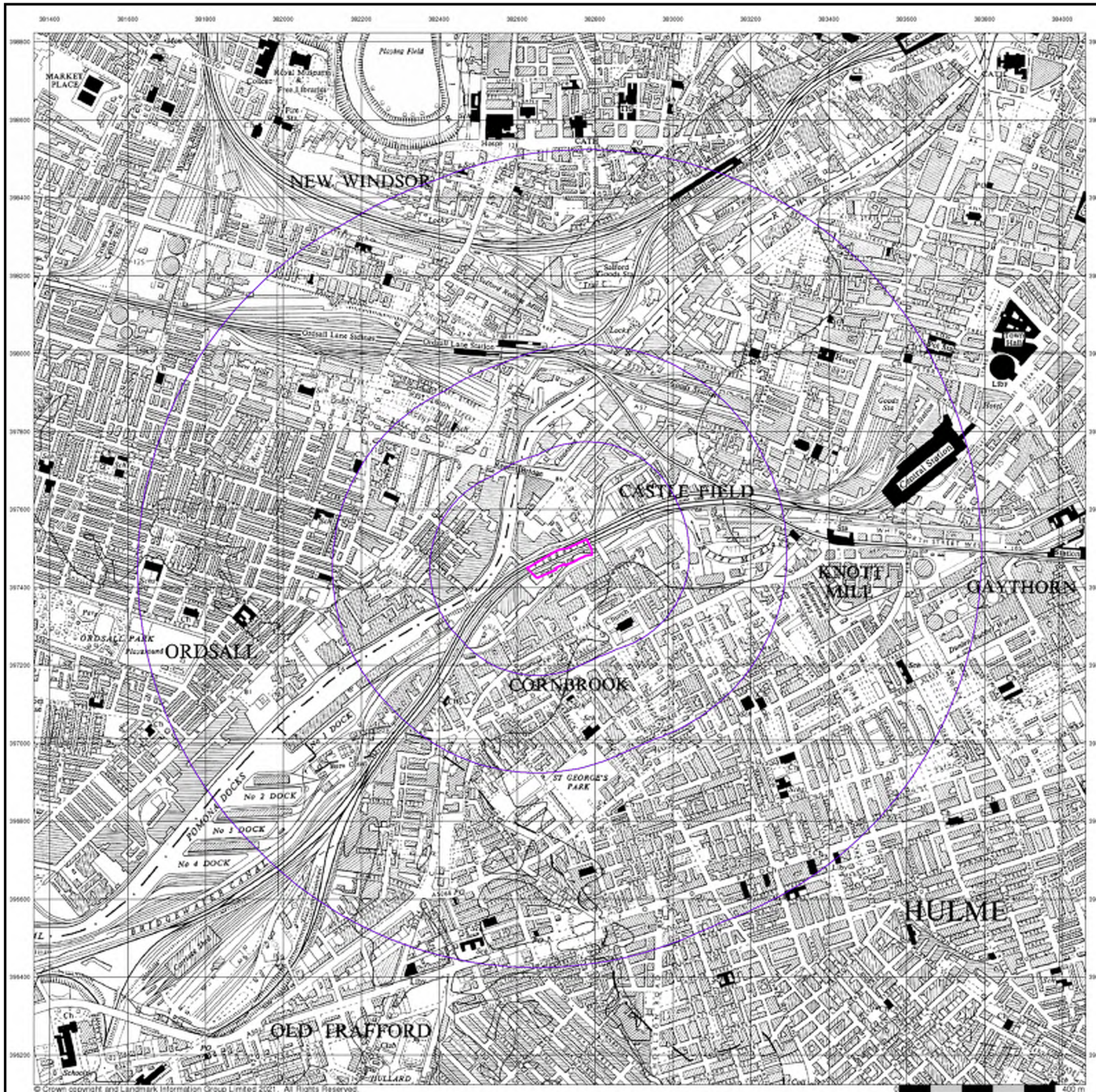
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Ordnance Survey Plan

Published 1956

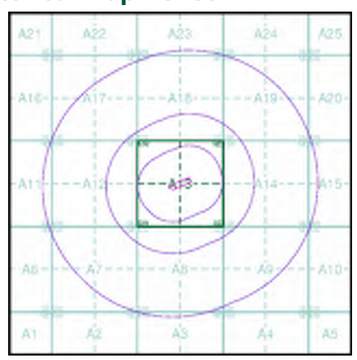
Source map scale - 1:10,000

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Map Name(s) and Date(s)

SJ89NW
1956
1:10,560

Historical Map - Slice A

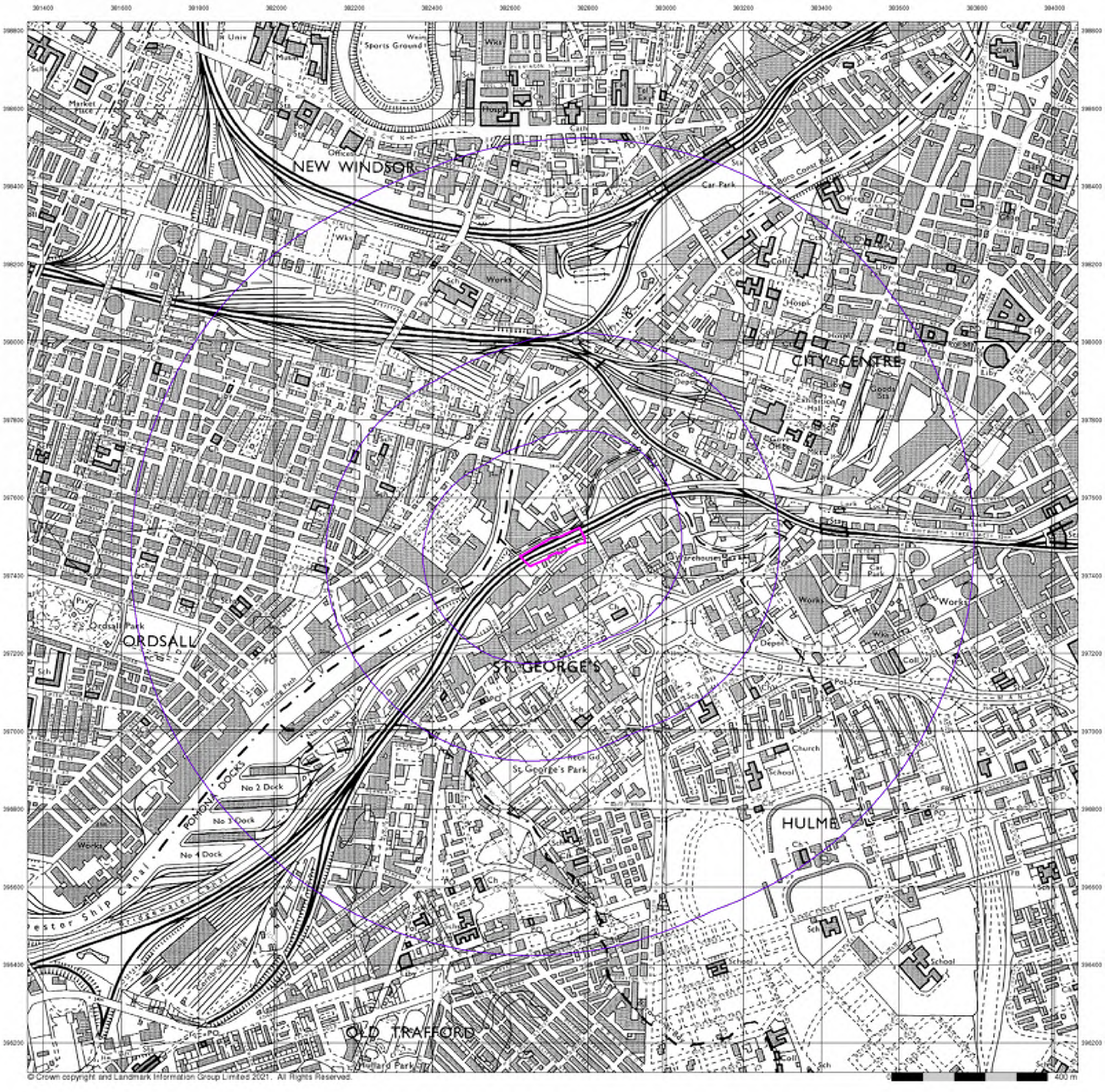


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Site Area (Ha):	0.64
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Site Details

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Ordnance Survey Plan

Published 1972

Source map scale - 1:10,000

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Map Name(s) and Date(s)

SJ89NW
1972
1:10,000

Historical Map - Slice A





Order Details

Order Number: 272481752_1_1
Customer Ref: 077442
National Grid Reference: 382710, 397470
Slice: A
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Site Details

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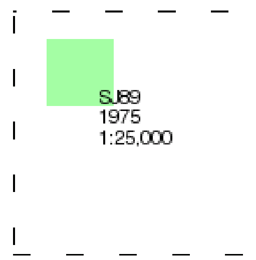
Manchester

Published 1975

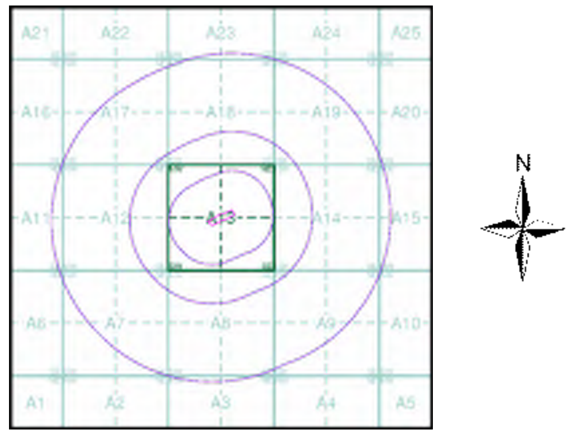
Source map scale - 1:25,000

These maps were produced by the Russian military during the Cold War between 1950 and 1997, and cover 103 towns and cities throughout the U.K. The maps are produced at 1:25,000, 1:10,000 and 1:5,000 scale, and show detailed land use, with colour-coded areas for development, green areas, and non-developed areas. Buildings are coloured black and important building uses (such as hospitals, post offices, factories etc.) are numbered, with a numbered key describing their use.
They were produced by the Russians for the benefit of navigation, as well as strategic military sites and transport hubs, for use if they were to have invaded the U.K. The detailed information provided indicates that the areas were surveyed using land-based personnel, on the ground, in the cities that are mapped.

Map Name(s) and Date(s)



Russian Map - Slice A



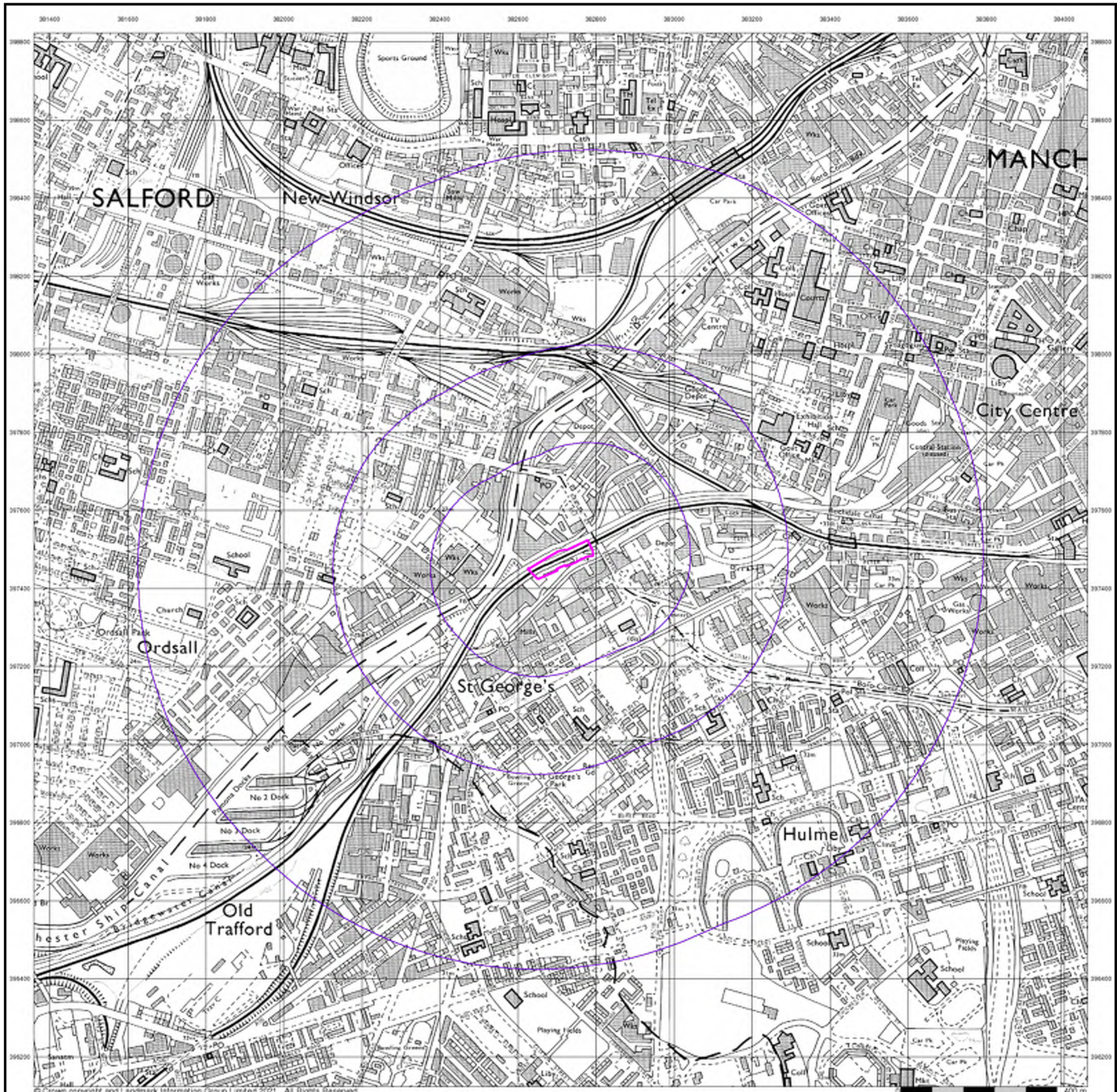
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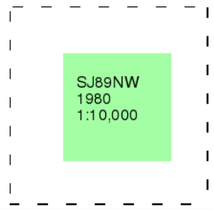
Ordnance Survey Plan

Published 1980

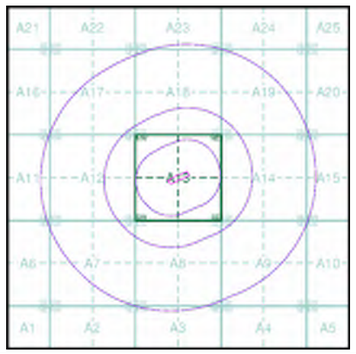
Source map scale - 1:10,000

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Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

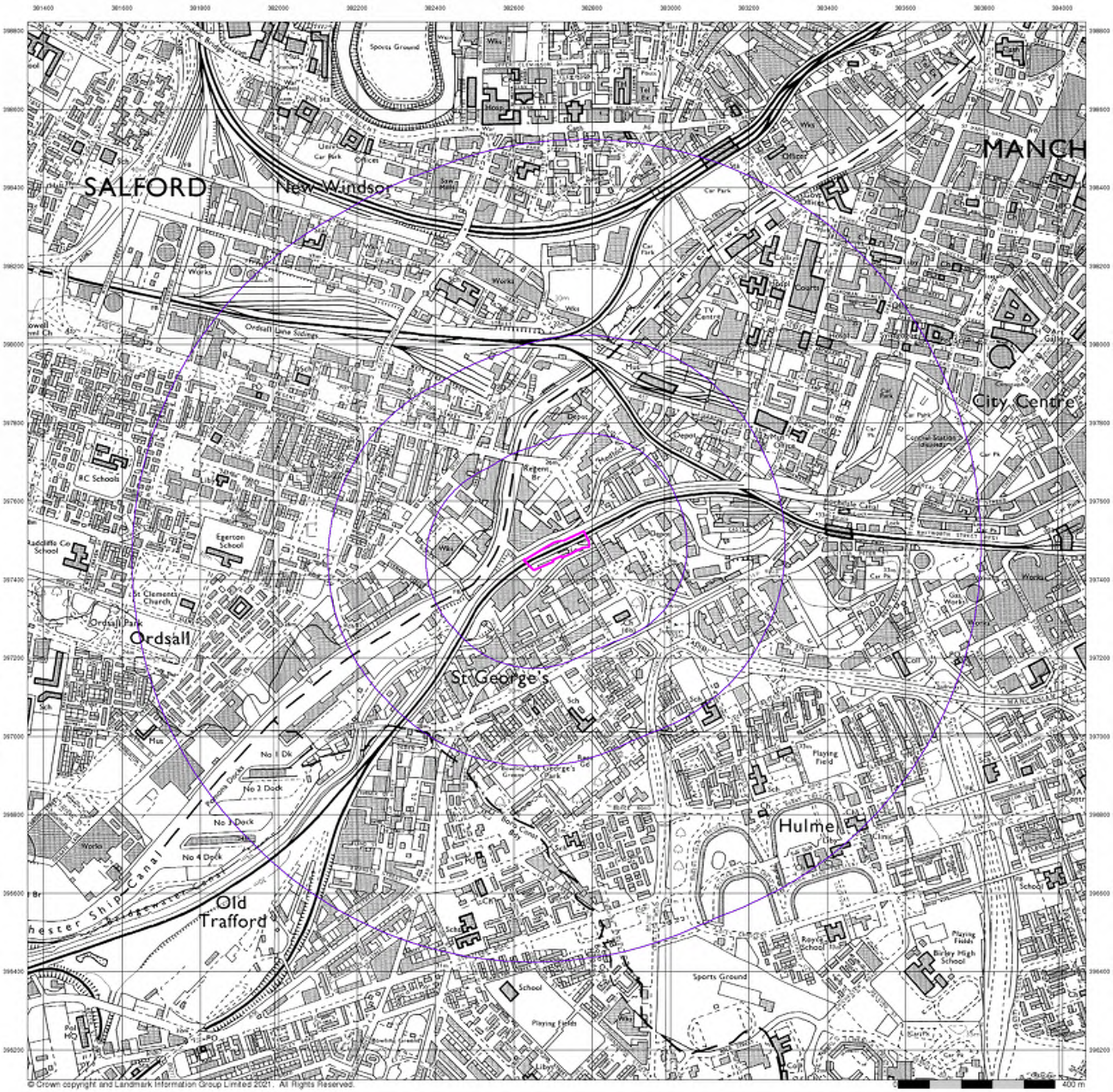
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SJ89NW
1985
1:10,000

Historical Map - Slice A



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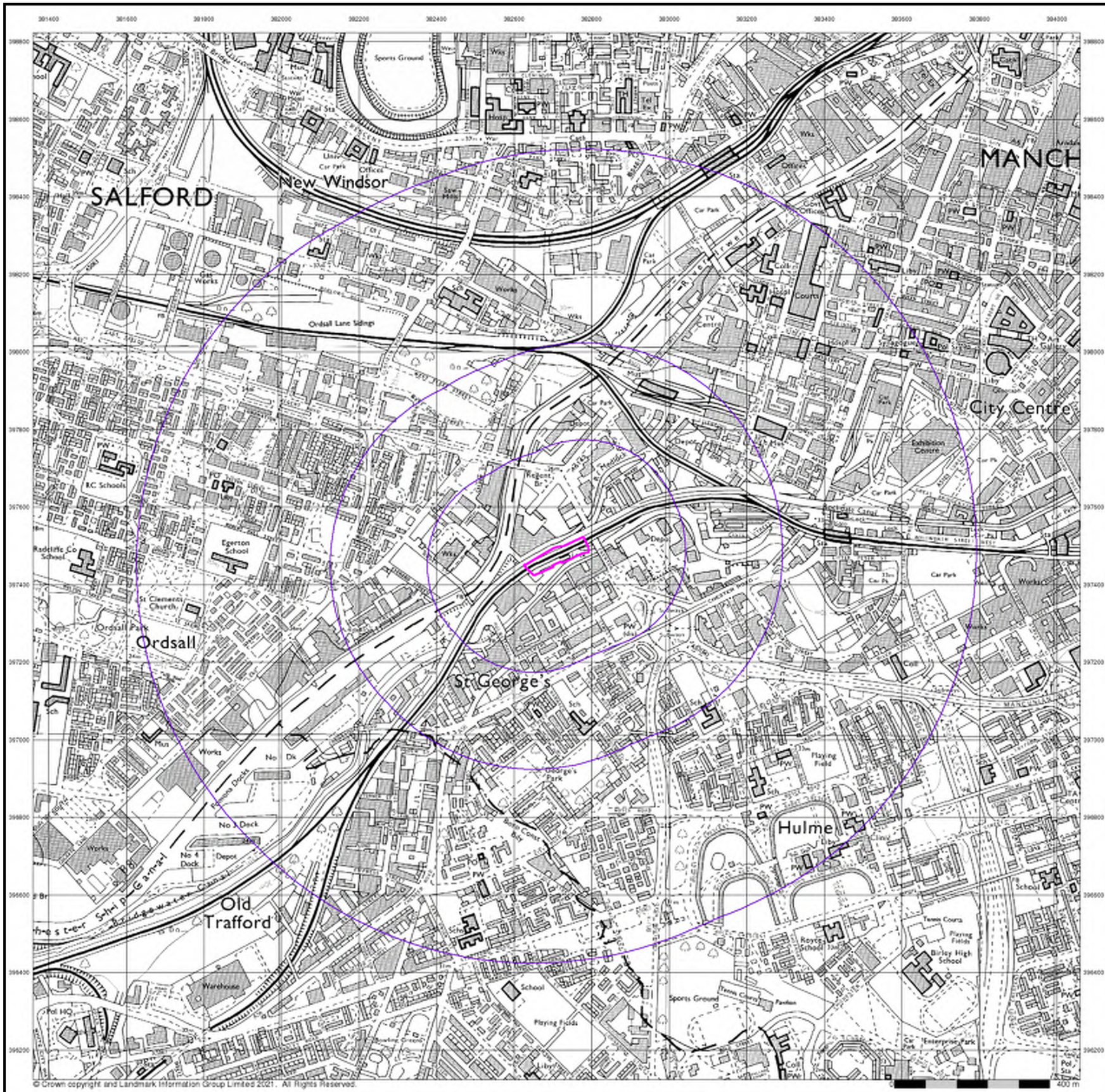
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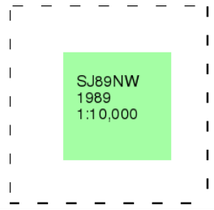
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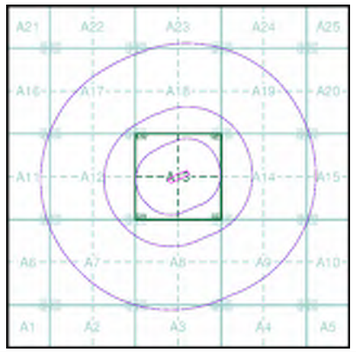
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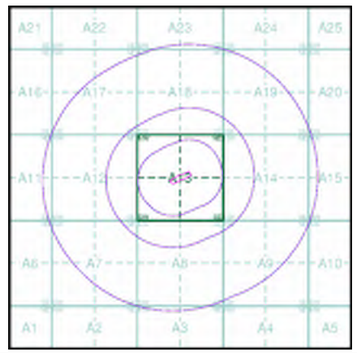
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Historical Map - Slice A



Order Details

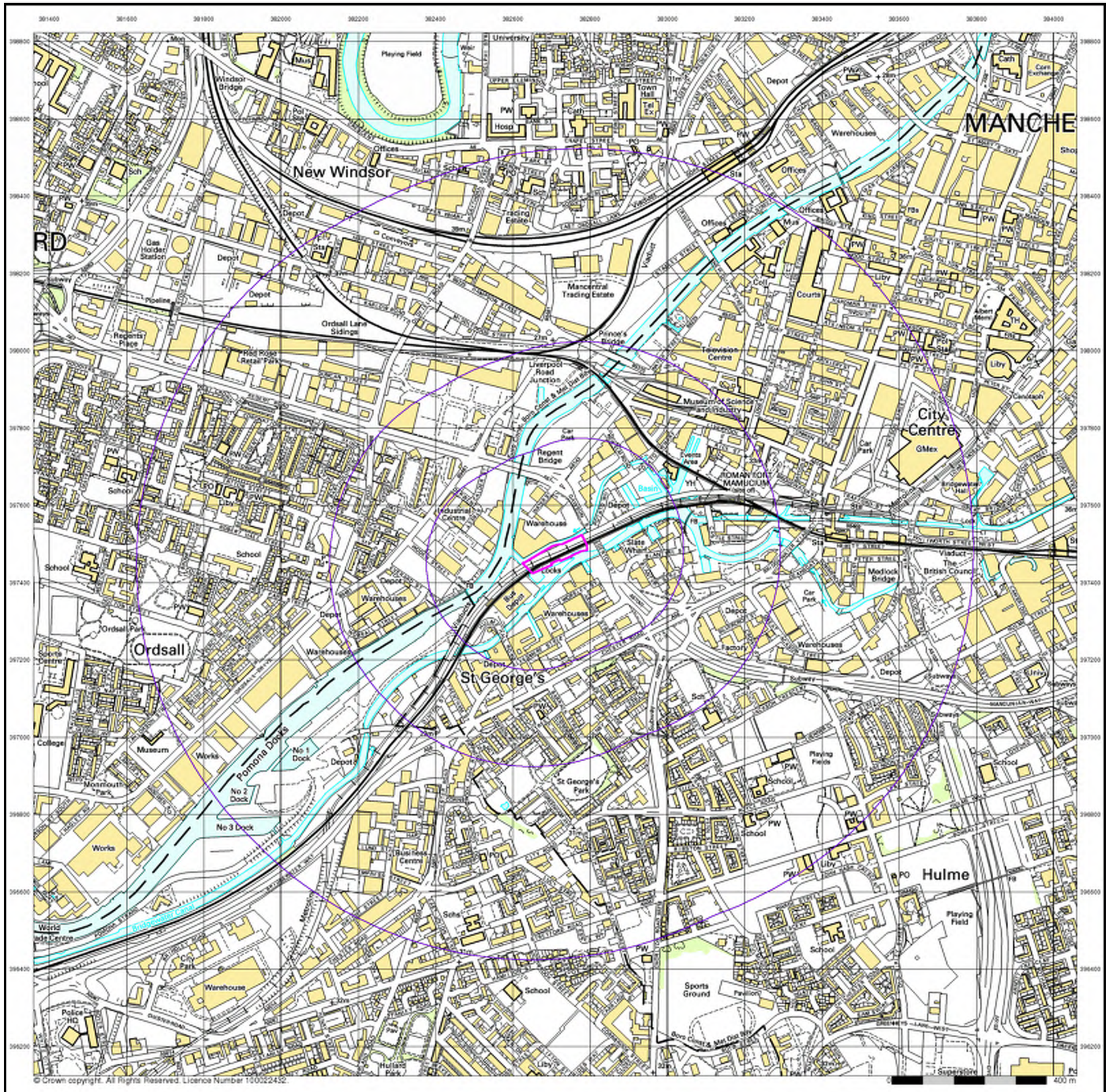
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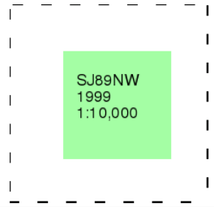
10k Raster Mapping

Published 1999

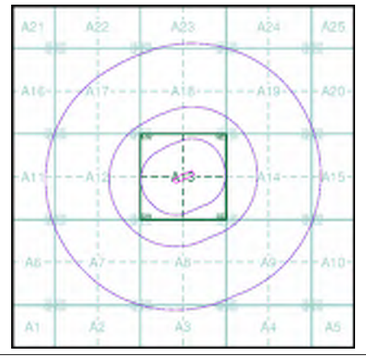
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Historical Map - Slice A



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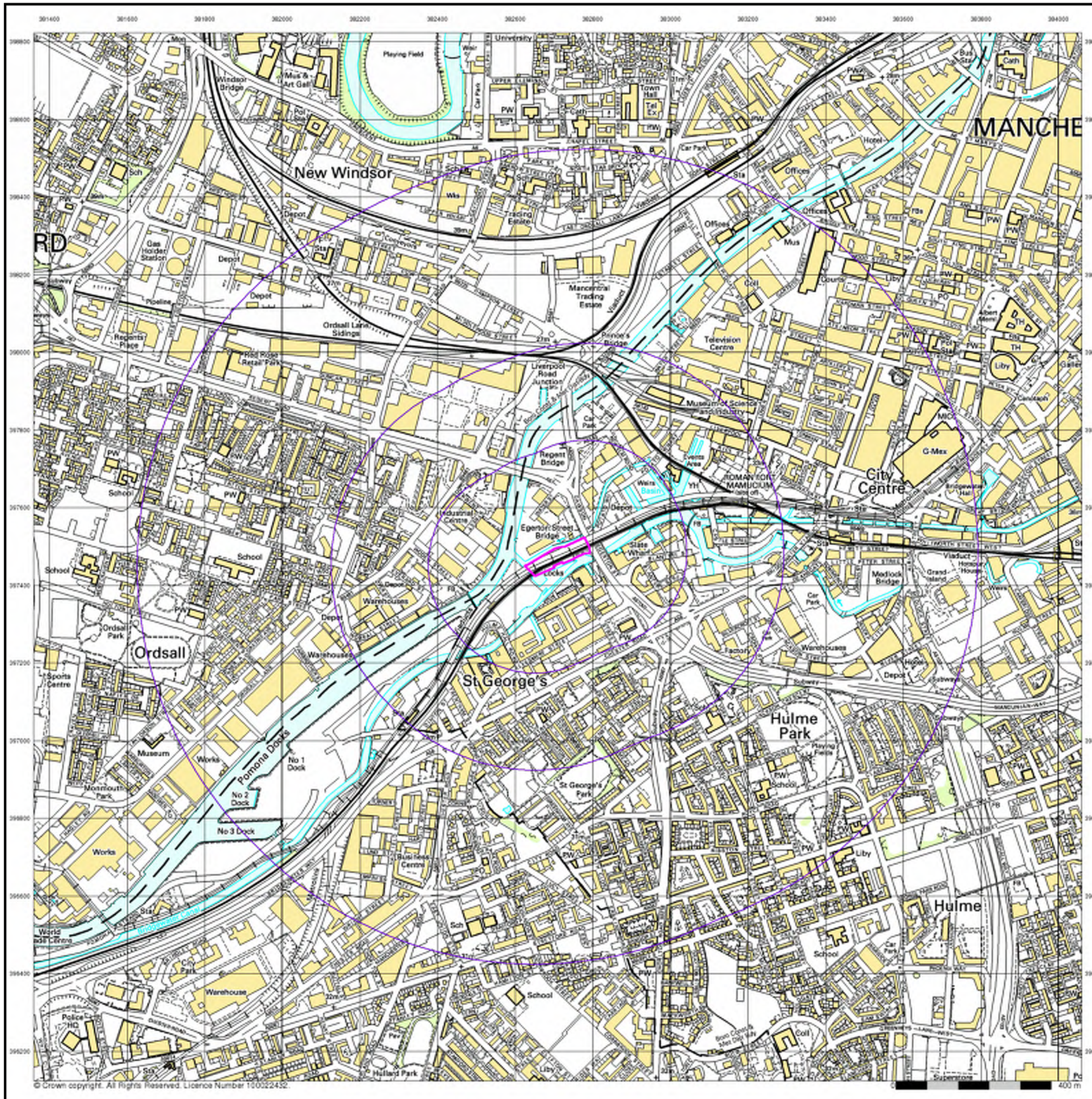
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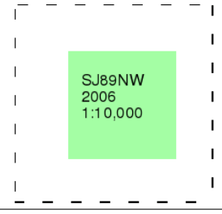
10k Raster Mapping

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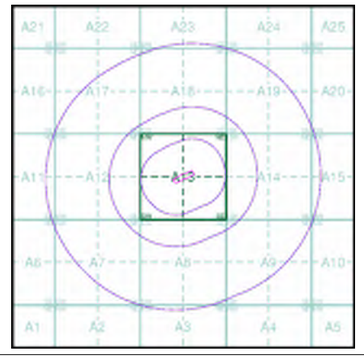
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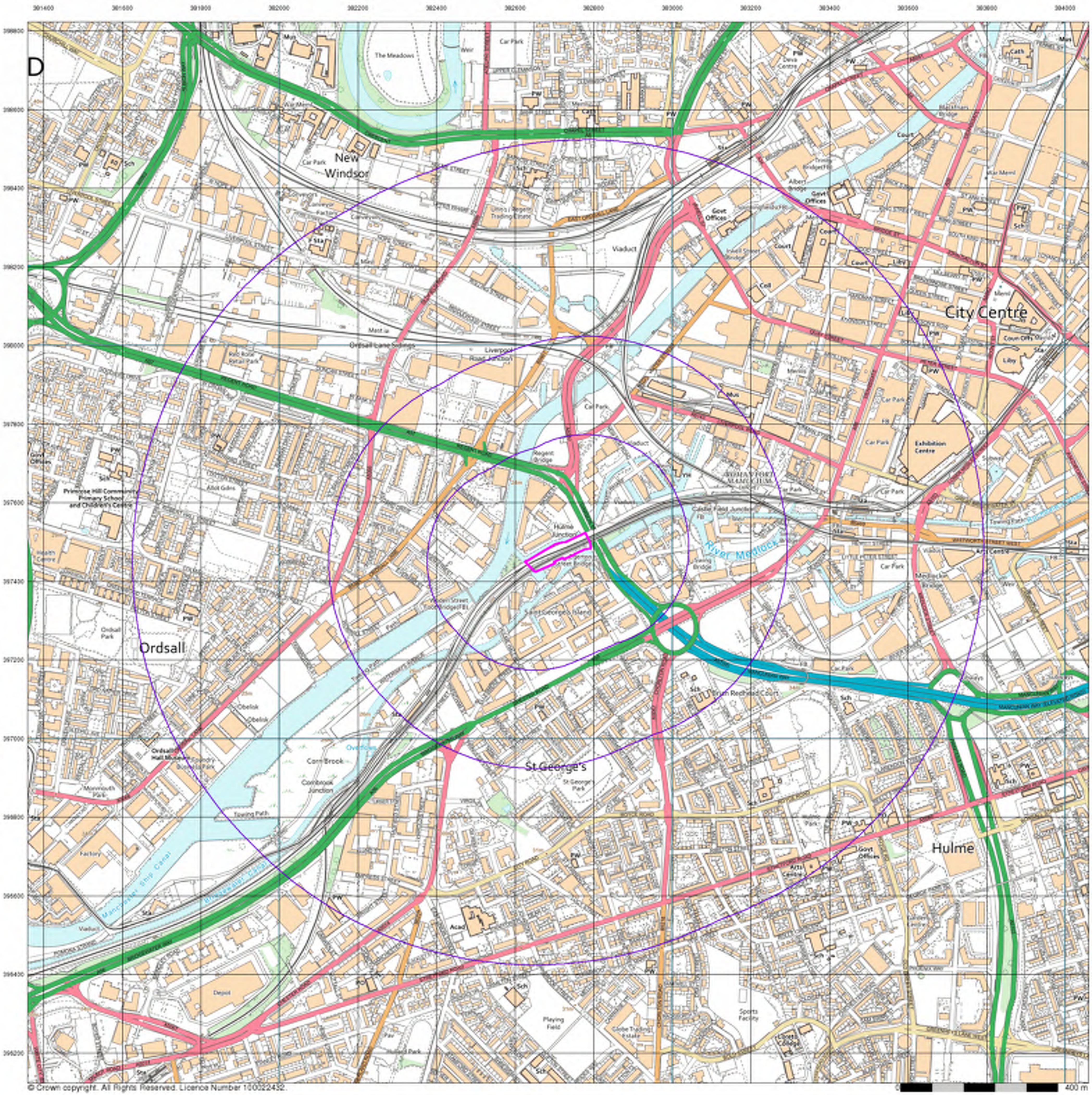
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VectorMap Local

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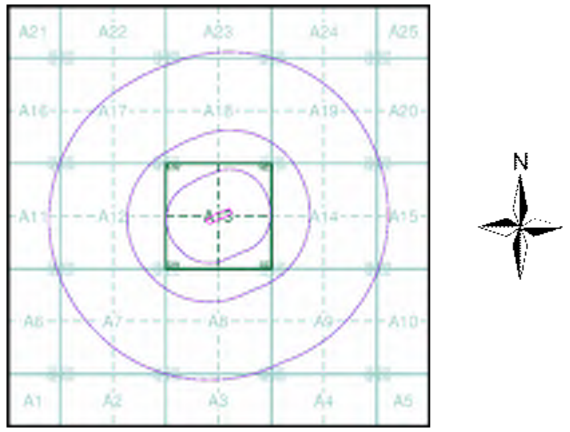
Source map scale - 1:10,000

VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)

SJ89NW
2020
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Historical Map - Slice A



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Appendix C Qualitative Risk Assessment Rationale

The site-specific risk assessment, presented in this report, follows the principle of establishing whether there is a viable linkage between a contaminant source to a potential receptor, via an exposure pathway.

The risk assessment corresponds with the total site area and incorporates both descriptive (qualitative) and, where available, numerical (quantitative) lines of evidence.

Risk assessment is the process of collating known information on a hazard or set of hazards to estimate actual or potential risk to receptors. The receptor may be humans, a water resource, a sensitive local ecosystem or future construction materials. Receptors can be connected to the source by one or several exposure pathways such as direct contact for example. Risks are generally managed by isolating the receptor or intercepting the exposure pathway or by isolating or removing the hazard.

Without the three essential components of a source, pathway and receptor there can be no risk. Therefore, the presence of contaminant source on a site does not necessarily mean there is a risk.

The risk assessment considers the likelihood of an event taking place (accounting for the presence of the source and receptor and the viability of the exposure pathway) in conjunction with the severity of the potential consequence (accounting for the potential severity of the hazard and the sensitivity of the receptor).

In the risk assessment, the consequence of the hazard has been classified as severe or medium or mild or minor and the probability (likelihood) of the circumstances occurring classified as high likelihood or likely or low likelihood or unlikely.

The consequences and probabilities are subsequently cross-correlated to give a qualitative estimation of the risk using Department of the Environment risk classifications as detailed in the table below and as referenced in CIRIA C552.

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability (Likelihood)	**High Likelihood**	Very High Risk	High Risk	Moderate Risk	Moderate/Low Risk
	Likely	High Risk	Moderate Risk	Moderate/Low Risk	Low Risk
	Low Likelihood	Moderate Risk	Moderate/Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate/Low Risk	Low Risk	Very Low Risk	Very Low Risk

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In accordance with DoE guidance, the following categorisation of **consequence** has been developed.

Classification	Definition	Examples
Severe	Short-term (acute) risk to human health likely to result in "significant harm" as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resource. Catastrophic damage to buildings/property. A short-term risk to an ecosystem or organisation forming part of such ecosystem.	High concentrations of cyanide on the surface of an informal recreation area. Major spillage of contaminants from site into controlled water. Explosion, causing building collapse (can also equate to a short-term human health risk if buildings are occupied).
Medium	Chronic damage to Human Health. Pollution of sensitive water resources. A significant change in an ecosystem or organism forming part of such ecosystem.	Concentration of a contaminant from site exceeds the generic or site-specific assessment criteria. Leaching of contaminants from a site to a Principal or Secondary A aquifer. Death of a species within a designated nature reserve. Lesser toxic and asphyxiate effects
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services. Damage to sensitive buildings/structures/services or the environment.	Pollution of non-classified groundwater (inc. Secondary B aquifers). Damage to building rendering it unsafe to occupy (e.g. foundation damage resulting in instability).
Minor	Harm, although not necessarily significant harm, which may result in a financial loss or expenditure to resolve. Non-permanent health effects to human health (easily prevented by means such as personal protective clothing, etc). Easily repairable effects of damage to buildings, structures and services.	The presence of contaminants at such concentrations that protective equipment is required during site works. The loss of plants in a landscaping scheme. Discoloration of concrete.

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In accordance with DoE guidance, the following categorisation of **probability** has been developed.

Classification	Definition
High Likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution.
Likely	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low Likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place and is less likely in the shorter term.
Unlikely	There is a pollution linkage, but circumstances are such that it is improbable that an event would occur even in the very long term.

In accordance with DoE guidance, the following categorisation of **risk** has been developed.

Classification	Definition
Very High Risk	There is a *high probability* that *severe harm* could arise to a designated receptor from an identified hazard at the site without appropriate further action.
High Risk	*Harm* is *likely to arise* to a designated receptor from an identified hazard at the site without appropriate further action.
Moderate Risk	*It is possible* that without appropriate further action *harm could arise* to a designated receptor. It is relatively *unlikely* that any such harm would be *severe,* and if any harm were to occur it is *more likely* that such harm would be *relatively mild.*
Low Risk	*It is possible* that *harm could arise* to a designated receptor from an identified hazard. It is *likely* that, at worst, if any harm was realised any effects would be *mild.*
Very Low Risk	The presence of an identified hazard does not give rise to the potential to cause harm to a designated receptor.

The term ‘risk’ in this instance refers to the risk that the source, pathway, receptor linkage for a given source of contamination is complete. It does not refer to immediate risk to individuals or features present on the site from potential contaminants and is intended to be used as a tool to assess the necessity of further investigation.

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REPORT

Castlefield Viaduct, Manchester

Land Quality Desk Study and Preliminary Risk Assessment Report

Client: National Trust

Reference: PC2387-RHD-ZZ-XX-RP-Z-0002

Status: S0/P01.01

Date: 10 May 2021

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Date: 10 May 2021
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Drafted by: Kari Dennis

Checked by: Elspeth Harris

Date: 10.05.2021

Approved by: Jamie Gardiner

Date: 10.05.2021

Classification
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Appendix C – BGS Historical Borehole Logs
Appendix D – Coal Authority Consultants Coal Mining Report
Appendix E – Groundsure Preliminary Unexploded Ordnance Risk Assessment

Appendix F – Qualitative Human Health and Environmental Risk Assessment Methodology

Appendix G - Limitations

Executive Summary

Royal HaskoningDHV has been commissioned by the National Trust (the Trust) to undertake a Land Quality Desk Study and Preliminary Risk Assessment (PRA) for Castlefield Viaduct, Manchester. The PRA will inform proposals to repurpose the historic viaduct structure into an elevated urban park with integrated active travel hub.

The Trust's vision is for the urban park to be utilised in a variety of ways, ranging from exhibitions, fruit and vegetable growing, sculptures, work space, onward travel information, community meeting and green space. A Phase 1 Pilot Scheme 'micro park' will be delivered on the eastern section of the viaduct, for a 12 week period in the summer of 2021. The temporary scheme will be undertaken to test the design possibilities and opportunities at the viaduct and generate momentum and support for the proposed scheme.

Castlefield Viaduct is a Victorian railway viaduct built in 1893, located in Castlefield within Manchester City Centre. It is located approximately 200m west of Castlefield Train Station and 800m west of Manchester Oxford Road Train Station. The viaduct is currently unused and the land below, and surrounding the viaduct, comprises a canal basin, tow paths, cark parks, a railway line and roadways. Land surrounding the viaduct is dominated by blocks of residential flats, a youth hostel, former warehouses and industrial buildings repurposed as offices, residential and gallery use. Open space and restaurants are located along wharf areas of the canal basin.

The railway is recorded as being dismantled in the late 1960s. The land underlying the viaduct was historically occupied by a roman fort, timber wharf, canal network and warehouses. The area surrounding the site has a long industrial history including use as railways, quaysides, wharfs, garages, gravel and sand pits, dye works, chemical works, paper mills, gas works and an abattoir.

Information provided by the British Geological Survey (BGS) indicates that the land below the viaduct is underlain by bedrock of the Chester Pebble Bed Formation which is classified as a Principal Aquifer.

Potential sources of contamination on the viaduct were identified as comprising railway land (ballast) and paint from the viaduct structure which may contain contaminants including metals, asbestos, phenols, sulphates, Polycyclic Aromatic Hydrocarbons (PAHs), fuel oils, lubricating oils, greases and herbicides. Below the viaduct and in the surrounding area, potential sources of contamination comprise Made Ground associated with demolished buildings, a timber yard and scrap metal yard, dockyards, an abattoir, silk and cotton mills, paper mills, automobile engineering works, iron works, smithy, fibreboard container factory, cleansing depot, concrete depot and a garage.

In relation to the use of the site as an urban park and transport hub, following permanent redevelopment of the site a moderate risk to human health of future site users has been identified as requiring further investigation to quantify whether this presents a development constraint.

1 Introduction

Royal HaskoningDHV has been commissioned by the National Trust (the Trust) to undertake a Land Quality Desk Study and Preliminary Risk Assessment (PRA) for Castlefield Viaduct, Manchester, M3 4RU, centred at Ordnance Survey National Grid Reference (NGR) 383005, 397626 (herein referred to as the 'site'). The PRA will inform proposals to develop the historic viaduct structure into an elevated urban park with integrated active travel hub. A site location plan is provided in Figure 1.1, at the end of this report.

1.1 Proposed Scheme

Castlefield Viaduct is an unused, 330m long, historic structure in the heart of Manchester. The Trust wish to bring the viaduct back into use by repurposing the structure into an elevated urban park and integrated active travel hub. The Trust's vision is for the urban park to be utilised in a variety of ways, ranging from exhibitions, fruit and vegetable growing, sculptures, work space, onward travel information, community meeting and green space.

A Phase 1 Pilot Scheme 'micro park' will be delivered on the eastern section of the viaduct, for a 12 week period in the summer of 2021. The temporary scheme will be undertaken to test the design possibilities and opportunities at the viaduct and generate momentum and support for the permanent scheme. The temporary scheme will comprise the use of the viaduct as a 'micro park' for community events and organised walking tours. An architectural narrative booklet has been produced for the scheme, referred to as the Castlefield Story Book by Twelve Architects in July 2020, and visualisations included within the booklet indicate installation of a footpath across parts of the viaduct, the erection of weather shelters and placement of planting containers.

The Phase 2 'permanent urban park and travel hub scheme' will comprise a permanent development on the viaduct inclusive of food and beverage stands, garden areas, exhibition stalls, seating areas, an events space and toilet facilities.

Figure 1.2 illustrates the Castlefield Viaduct site boundary.

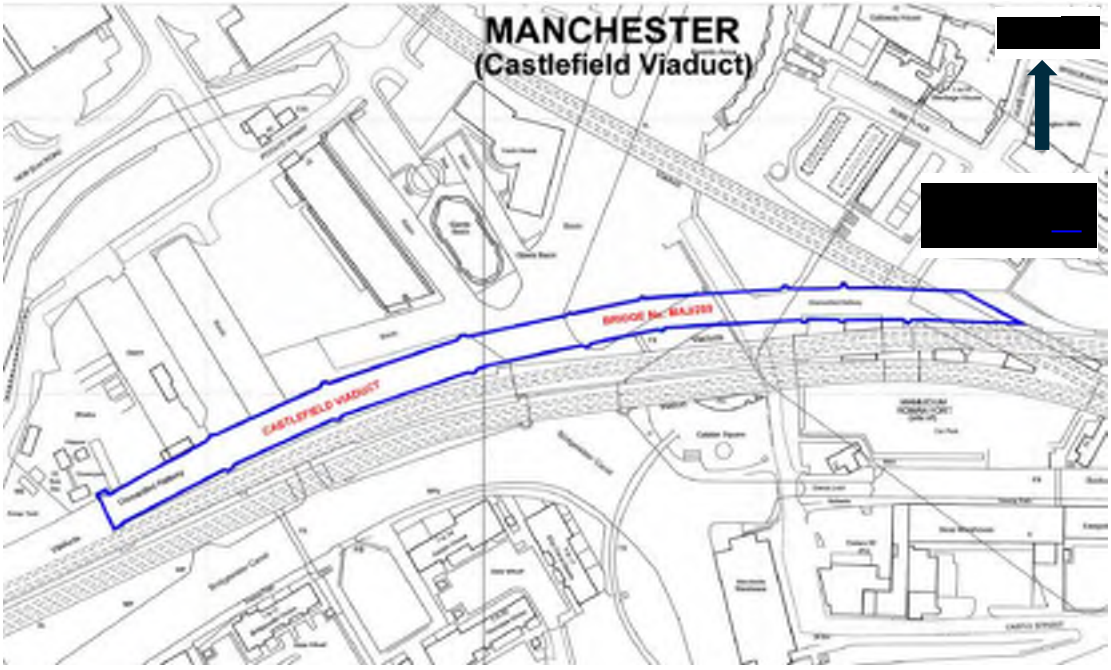


Figure 1.2: Site boundary

1.2 Objectives

The overall objectives of the PRA are as follows:

- provide information on the current conditions of the site with respect to contamination;
- provide an initial Conceptual Site Model (CSM) to identify and assess potential contaminant linkages associated with the site and the proposed development; and,
- provide recommendations for further works and assessments, if required, to quantify the potential risks and liabilities associated with the site and the feasibility of repurposing the viaduct.

1.3 Scope of Works

To assist in meeting the objectives stated in Section 1.2, the scope of the project comprises:

- a site walkover survey to document the current land use and site setting;
- purchase and review a Groundsure Insights Report including historical maps to identify former land uses and potential contaminative activities on and surrounding the site;
- a review of publicly available regulatory databases and information relating to hydrogeological features, hydrogeology, land use, ecologically sensitive areas and geology to establish the environmental setting of the site and sensitivity of the location;
- the development of a preliminary CSM following a source-pathway-receptor contaminant linkage approach; and,
- provision of an outline of the environmental risks with regard to ground and groundwater, which may potentially arise as liabilities or constraints associated with the site.

1.4 Legislative Context and Guidance

The assessment was undertaken in the legislative context of:

- Part 2A of The Environmental Protection Act (1990); and,
- The National Planning Policy Framework (NPPF) (2012).

The following good practice and statutory guidance were considered, and the assessment was undertaken in general accordance with:

- Environment Agency (EA) 'Land Contamination: Risk Management Framework', May 2020;
- Manchester City Council 'Planning Guidance in Relation to Ground Contamination: Guidance Note for Applicants, Developers, Land Owners and Consultants, September 2016;
- British Standard 'Investigation of Potentially Contaminated Sites – Code of Practice', BS EN 10175:2011;
- Department of Environment Food and Rural Affairs (Defra) 'Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance', PB13735 (2012);
- British Standard 'Guidance on Investigations for Ground Gas – Permanent Gases and Volatile Organic Compounds (VOCs)', BS 8576:2013;
- British Standard 'Code of Practice for Ground Investigations', BS 5930:2015;
- 'The Environment Agency's Approach to Groundwater Protection', February 2018, and,
- CIRIA 'Contaminated Land Risk Assessment – A Guide to Good Practice', C552 (2001).

1.5 Sources of Information

The following sources of information have been reviewed to inform the PRA:

- Groundsure Insights Report (2021) comprising historical maps, environmental sensitivity data and permitting records for a search area of 1km around the site boundary (reference number: GS-7712233);
- Groundsure Preliminary Unexploded Ordnance Risk Assessment (2021) (reference number: GS-7712199);
- The Coal Authority (2021) Consultants Coal Mining Report (reference: 51002453805001);
- British Geological Survey (BGS) Onshore GeoIndex Viewer;
- BGS Hydrogeological Map of Clwyd and the Cheshire Basin (Sheet No. 19), 1989;
- BGS Manchester Bedrock Map (Sheet number 85), 2010;
- BGS Manchester Bedrock and Superficial Map (Sheet number 85) 2011;
- Multi Agency Government Information for the Countryside (MAGIC) map application;
- Blue line boundary plan, Ref. 3586, provided by the Trust;
- Castlefield Viaduct Appendix A, National Trust, February 2021;
- Castlefield Viaduct story book architectural narrative booklet by Twelve Architects, July 2020; and,
- Castlefield Viaduct phase two temporary scheme specification v1.0 by Twelve Architects.

A site walkover survey was also undertaken on the 19th April 2021 by a Royal HaskoningDHV Environmental Consultant to verify current conditions at the site. The relevant findings and photographs of the site walkover are provided in Appendix A and incorporated into this report.

2 Site Setting

2.1 Site Location and Description

Castlefield Viaduct is a Victorian railway viaduct built in 1893, located in Castlefield within Manchester City Centre. It is located approximately 200 metres (m) west of Castlefield Train Station and 800m west of Manchester Oxford Road Train Station. The viaduct is owned by the Department for Transport and is currently unused.

The viaduct is linear in shape, being approximately 330m in length and approximately 14m wide, comprising eight spans. The viaduct is raised off the ground by approximately 16m. It is constructed predominantly of wrought iron/ steel and has decorative castellations along its length. Behind the castellation are bearing plates that support the end posts of 16 trusses, the longest of which reaches 53m. The viaduct is a Grade II listed structure.

The top of the viaduct is accessed by foot from Deansgate-Castlefield car park via a locked gate on the eastern site boundary (see Plate 1, Appendix A). Vehicular access to the Deansgate-Castlefield car park is made via a ramp off Albion Street. The ground surface of the car park is approximately 0.5m higher in elevation than the viaduct surface and there is a step down to the viaduct at the gate. There is no vehicular access onto the viaduct. Access onto the site by vehicles from Deansgate-Castlefield car park is prevented by a vehicle restraint system (VRS) barrier present along the eastern site boundary shared with Deansgate-Castlefield car park. If the VRS was removed, access by vehicles would be prevented due to the ground elevation difference between the car park and viaduct.

Historically, three railway tracks ran across the viaduct carrying trains in and out of Manchester Central Station. Today, the railway tracks are no longer evident and the surface of the viaduct is covered by a layer of railway ballast and vegetation.

The land below the viaduct is occupied by land parcels, roads, canals and a railway line as follows:

- Castle Street, a cobblestone road, is present beneath the eastern part of the viaduct and is oriented north to south.
- Duke Street is also located below the eastern part of the viaduct oriented in an east to west direction. Duke Street joins Castle Street at a T junction beneath the viaduct.
- The Bridgewater Canal Tow Path is present beneath the eastern part of the viaduct roughly orientated north to south. The tow path connects Castle Street to the wharfs that surrounding the canal network and canal basin, part of which is also below the viaduct. The tow path also leads to Castlefield Bowl which is an outdoor events area approximately 80m north of the viaduct.
- The Bridgewater Canal and two basins, which feed into the canal, are present below the length of the viaduct, orientated east to west. Two footbridges which cross the canal basin are also located below the viaduct (see Plate 5, Appendix A);
- A railway line runs below the eastern part of the viaduct (see Plate 2, Appendix A) towards Deansgate Station.
- Slate Wharf Bridge is also present beneath the western part of the viaduct which connects the Bridgewater Canal Tow path to Potato Wharf, located approximately 20m to the north of the viaduct.

The land parcels below the viaduct are owned by the following parties (moving west to east along the viaduct):

- Lend Lease Residential (NW) Ltd at the western end of the viaduct;
- Pemberstone Reversions Ltd; and,
- The Council & City of Manchester.

A site layout plan is provided in Figure 2.1, at the end of this report.

2.2 Site Walkover Survey

A site walkover was carried out by Royal HaskoningDHV on the 19th April 2021, a summary of the findings of the site walkover and photographs are presented in Appendix A, notable observations were:

- The railway which runs below the viaduct is supported by a brick structure (Plates 2 and 4, Appendix A);
- There is a staircase and lift on the northern side of the viaduct which provides access to Deansgate-Castlefield car park and the viaduct by foot (Plate 6, Appendix A);
- The ballast across the surface of the viaduct undulates by up to 0.2m in height and the average thickness of ballast is estimated to be 0.3m. The ballast is covered in vegetation comprising moss, plants and shrubs (Plates 12 to 15, Appendix A). Evidence of vegetation clearance along the top of the viaduct was observed. Windblown litter was present in and amongst the ballast. No observations were made on site of wooden railway sleepers associated with the railway lines which historically ran across the viaduct.
- The viaduct structure appears to be in a state of disrepair with heavy corrosion (rust) observed in places. Flakes of paint and metal fragments were observed on the surface of the ballast which were between 1cm to 15cm in length. These appear to have originated from the overhead metal beams that cross the viaduct. Patches of a bitumen/tar were also observed across the viaduct surface, approximately 2cm to 40cm in width. Scaffolding was also present along parts of the viaduct structure.
- A series of drainage grids were observed along the viaduct. They comprised six grids or sunken circular dips in the ballast, approximately 40cm in diameter. The grids were in a row with equal spacing in a north-south direction. In some locations, a metal channel below the base of the viaduct platform could be seen below the metal grids which water falls into. Downspouts were observed on most of the supporting columns which connected to covered grids at ground level below the viaduct. Standing water was observed in some lengths of metal 'I' beam structure on the eastern and western sides of the viaduct. There was evidence of water pooling at the surface of the viaduct, as patches of algae and mosses were observed indicating the surface water does not drain readily away from the structure.
- A concrete conduit with electricity cables was observed along part of the northern boundary of the viaduct. This was in poor condition with some concrete slabs missing and broken. Water collected in part of the viaduct structure on the southern and northern boundaries of the structure, indicating the drainage on the viaduct may be ineffective in some areas, as shown in Plate 17.
- A metal structure of unknown use is attached to one of the overhead beams on the southern side and eastern area of the viaduct, shown in Plate 11.
- There was evidence of a trespasser using the site, a tent and sleeping bag were observed in the eastern part of the site.

- Construction works were observed below and to the north of the viaduct. The works below the viaduct comprised the erection of wooden kiosks for outdoor food and beverage stalls. Construction of residential flats was taking place to the north west of the viaduct.

The site layout plan is presented as Figure 2.1, at the end of the report.

2.3 Surrounding Area

The viaduct is located within a mixed use setting; land uses adjacent to the site (up to 500m) are summarised within Table 2-1 below.

Table 2-1: Current Surrounding Site Uses

Direction	Description
North	Immediately to the north of the western half of the viaduct is Potato Wharf and the Bridgewater Canal and basins. Beyond Potato Wharf are blocks of residential flats (10m from the northern site boundary) and a construction site. Giant's Basin is located immediately north of the centre of the site with a YHA youth hostel present on its bank, approximately 60m from the northern site boundary. Beyond the youth hostel is a railway line, orientated in a south-east to north-west direction. The railway line is located approximately 280m north of the western half of the site and travels directly under the viaduct in the eastern part of the site. Beyond the railway line are residential houses, Liverpool Road and Manchester Liverpool Road Railway Station, 230m north of the site at its nearest point. To the north of the eastern half of the site is the Bridgewater Canal Tow Path, Castle Street, the railway line and an events area, referred to as Castlefield Bowl (50m from the northern site boundary). To the north of the easterly end of the viaduct is Duke Street, grassed areas, the Castlefield Urban Heritage Park and Beaufort Street (40m from the north site boundary at its closest point). The River Medlock is located approximately 40m to the north-west of the site, the river flows in a western direction and then to the south where is flows below the Dawson Street road bridge.
East	Immediately to the east of the site is Deansgate-Castlefield car park. The car park is flat and roughly level with viaduct (approximately 0.5m higher in elevation). The car park access road slopes down from the car park, along a former railway line to ground level at Trafford Street, approximately 450m east of the site. The car park area is raised above the surrounding ground level by red brick arches, which are accessed along Bridgewater Street to the north east of the site. The arches are used as commercial units and car parking facilities. Warehouses, commercial units, residential flats and offices are located in the wider area east of the site. A staircase which leads from ground level to the Deansgate-Castlefield car park is located to the north-east of the site. The staircase is located approximately 20m south of Beaufort Street and 10m from the eastern site boundary.
South	Immediately to the south is a tramline which runs parallel to the viaduct. Beyond the tramline is a railway line which also runs parallel to the viaduct and tramline. The Bridgewater Canal and canal basin are located to the south of the tram and railway lines.

Direction	Description
	Beyond the canal is Slate Wharf, Merchant Bridge and Castle Street, the buildings on Castle Street comprise art galleries, offices, residential flats, restaurants and bars. The railway archway immediately below the railway line to the west of Castle Street has been developed into a restaurant with associated outdoor dining area. Land parcels to the south of the viaduct are owned by Peel Land and Properties (Ports) Ltd, Peel Investments (North) Ltd, Castlefield Estates, and MJF Ssas Trustees Limited; and land to east is owned by TIGM. The Rochdale Canal is located approximately 50m south the site. It runs in an east to west orientation and terminates at Rochdale Canal Lock 92, approximately 30m east of a footbridge where Castle Street crosses the canal. A building, which was part of the former saw mill with a chimney, is located on the northern bank of the Rochdale Canal, approximately 50m east of the site. This building appears to have been repurposed for use as a gallery and residential apartments. Merchants Bridge footbridge crosses the Bridgewater Canal and connect Catalan Square on the northern bank to Slate Wharf on the southern bank. Slate Wharf is characterised by residential apartment blocks, Castlefield Green area of grass, canal quay, car parks and road network. The Slate Wharf Bridge is closed to public access via a locked gate and is located approximately 20m south of the viaduct beyond the tram and active railway lines.
West	Immediately west of the site is a parcel of vacant land covered in railway ballast which would have historically formed part of the railway which crossed the viaduct. This area tapers in width becoming narrower due to the change in trajectory of the tramline located immediately south. Egerton Street and Dawson Street (A56) are located approximately 50m west of the site, which runs in a north to south direction. The River Medlock flows below Dawson Street Bridge at this point. Land to the west is occupied by roads, residential and commercial buildings.

3 Environmental Setting

3.1 Geological Conditions

Information on geological conditions below the site has been collated from the Groundsure Insights Report provided in Appendix B and BGS datasets, including 1:50,000 scale geological mapping and historical BGS borehole records, provided in Appendix E. Geological conditions are summarised below.

3.1.1 Anticipated Geology

Information presented on the BGS online geology viewer[1], BGS bedrock and superficial map[2] and BGS bedrock map[3] indicates that superficial deposits are absent and the site is underlain by the Chester Pebble Bed Formation. The BGS mapping indicates that the Chester Pebble Bed Formation as a whole reaches thicknesses of up to 440min the surrounding area. A description of the formation is provided in Table 3-1.

Table 3-1: Geology

Stratum	Unit	Description
Bedrock	Chester Pebble Bed Formation	Fine to coarse grained sandstone, commonly pebbly with conglomerates and sporadic siltstones.

The BGS mapping indicates that superficial deposits are absent across the site. The nearest superficial deposits to the site boundary are recorded to be present approximately 70m south of the site, comprising Till. Glaciofluvial and Alluvium deposits are also recorded within 250m of the site.

3.1.2 Summary of Historical BGS Records

A review of historical borehole records, via the BGS online viewer, indicates that there are two boreholes located on the land underlying the viaduct; however, one of the boreholes is recorded as being confidential and so could not be reviewed. A summary of the ground conditions encountered within the borehole located on land below the viaduct, which could be viewed, is given below in Table 3-2 with a copy of the borehole log provided in Appendix C.

Table 3-2: Summary of BGS boreholes on land below the viaduct

Strata	Description	Depth (m bgl)
Made Ground	Hardstanding (setts).	0.00 - 0.15
	Ashes, stones, sand, brick fragments.	0.15 – 1.20
Bedrock	Very dense orange fine/medium grained sandstone.	1.20 – 3.00 (base of borehole)

There are an additional 176 historical boreholes located within 250m of the viaduct, of these 100 are available for view. A summary of the geology encountered within historical boreholes located within 50m of the site is provided below in Table 3-3.

Table 3-3: Summary of BGS boreholes within 20m of the viaduct

[1] *BGS online viewer http://mapapps.bgs.ac.uk/geologyofbritain/home.html*
[2] *Geological Survey of England and Wales 1:50,000 geological map series, sheet 85, Manchester Bedrock and Superficial Deposits map http://www.largeimages.bgs.ac.uk/iip/mapsportal.html?id=1009337 dated 2011*
[3] *Geological Survey of England and Wales 1:50,000 geological map series, sheet 85, Manchester Bedrock map http://www.largeimages.bgs.ac.uk/iip/mapsportal.html?id=1009338 dated 2010*

Strata	Description	Depth (m bgl)
Made Ground	Descriptions of Made Ground included: ■ Setts; ■ Ashes, stones, sand and brick pieces; and, ■ Medium dense ask and brick pieces.	0.00 – 4.20
Superficial deposits/weathered bedrock*	Descriptions of superficial deposits included: ■ Gravel; ■ Stiff brown gravelly clay; ■ Stiff laminated silty clay; ■ Sand; and, ■ Silty sand.	1.90 – 6.10
Bedrock	Dense sandstone	0.50 – 6.25 (base of excavation)

*From the descriptions given on the borehole logs reviewed it is not certain whether the encountered gravels, clays, sands and silts are superficial deposits or weathered bedrock.

3.1.3 Mining and Mineral Extraction

The Coal Authorities Consultant Coal Mining Report, provided in Appendix D, indicates that the site is not located within an area affected by past underground mining, probable unrecorded shallow workings, spine roadways at shallow depth, mine entries, abandoned mines, outcrops, geological faults, opencast mines or Coal Authority managed tips.

The Groundsure Insights Report, provided in Appendix B, indicates that there are 19 records of surface ground workings on the land below the viaduct, these include 12 records of canals, four records of unspecified wharves, one quay, one unspecified ground workings and one timber wharf. An additional 24 records of surface ground working are located within 250m of the site, these include:

- Ten records relating to canals (closest located 240m west of the site);
- Eight records relating to quays (closest recorded 87m south of the site);
- One record relating to an unspecified ground working (located 77m south of the site);
- One record relating to a water body (located 3m south of the site);
- One record of a gravel pit (located 41m south east of the site);
- One record of a pond (located 153m south of the site);
- One record of a sand pit (located 164m south of the site); and,
- One record of a refuse heap (located 188m north west of the site).

3.1.4 Ground Stability

Ground stability hazard classification for the site, as detailed within the Groundsure Insights Report (Appendix B), are:

- negligible hazard of shrinking or swelling clay, with ground conditions predominantly non-plastic;
- low hazard of running sands;
- negligible hazard of compressible ground;
- very low hazard of collapsible deposits;
- very low hazard of landslides; and,
- negligible hazard of ground dissolution.

3.1.5 Radon Gas

The presence of radon gas is assessed in the UK according to the number of homes likely to be above the Action Level (200 Becquerel per cubic metre (Bq m^3)). Under Building Regulations, the requirement for protection measures (as described in BRE, 2001) in the construction of new buildings, conversions or extensions is dependent on Radon Potential[4].

Information resented on the UK Radon Map indicates that the site is located within a lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Therefore, radon protection measures are not required within new buildings in the vicinity of the site.

3.1.6 Unexploded Ordnance

A Groundsure Preliminary Unexploded Ordnance (UXO) Risk Assessment has been obtained for the site (Appendix E). The risk assessment indicates that there are significant potential sources of British / Allied UXO (unexploded ordnance) in close proximity to the site. Given the proximity of the site and the significance of the sources, the risk for the land underlying the viaducts from British / Allied UXO is considered to be high.

The risk associated with German UXO is considered to be medium. The risk assessment notes that historical records indicate a medium level of bombing density across the borough in which the site was situated during World War II.

3.2 Hydrogeology

Hydrogeological information for the site has been collated from a Groundsure Insights Report (Appendix B), DEFRA MAGIC map application[5] and BGS hydrogeological map[6]. The site is underlain by the Chester Pebble Bed Formation (sandstone) which is classified as a Principal Aquifer. A Principal Aquifer comprises layers of rock that have high intergranular and / or fracture permeability, meaning they usually provide a high level of water storage. They may also support water supplies and / or river base flow on a strategic scale.

The Glaciofluvial Deposits and Alluvium superficial deposits located within 250m of the site are classified as Secondary A Aquifers. These types of aquifer comprise permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. With the exception of a small area of Till located approximately 70m south of the site, which is classified as a Secondary A Aquifer. Till deposits are classified as a Secondary Undifferentiated Aquifer. This designation is given when it is not possible to attribute either category A or B to a rock type.

[4] *Public Health England, 2020 https://www.ukradon.org/*
[5] *DEFRA MAGIC Map Application https://magic.defra.gov.uk/MagicMap.aspx*
[6] *British Geological Survey 1:100,000 hydrogeological map series, sheet 19, Hydrogeological map of Clwyd and the Cheshire Basin, 1989 http://www.largeimages.bgs.ac.uk/iip/mapsportal.html?id=1003989*

The Groundsure Insights Report (Appendix B) indicates that the land underlying the viaduct is located within an area of high Principal Aquifer groundwater vulnerability in the eastern half of the site and a low Principal Aquifer groundwater vulnerability area in the western half of the site. The land underlying the viaduct as a whole is considered to have a high leaching class for soils.

The Groundsure Insights Report indicates that the land directly underlying the viaduct is rated as moderate to high risk in relation to groundwater flooding occurring at the surface. The risk assessment in relation to groundwater flooding is based on a 1 in 100-year return period.

The site is located within the designated Water Framework Directive (WFD) groundwater body of the 'Manchester and East Cheshire Permo-Triassic Sandstone Aquifers' (Water Body ID: GB41201G101100). The chemical and quantitative classification for the groundwater body was recorded as poor in 2015.

Groundwater was encountered at depths of 5.20m bgl and 5.30m bgl within three of the historical BGS boreholes located within 50m of the site. Groundwater was encountered within a sandy layer within the superficial deposits/weathered bedrock at all three locations. The location of historical BGS logs is presented in Figure 3.1.

3.2.1 Groundwater Abstractions

The Groundsure Insights Report (Appendix B) indicates that there are no records of groundwater abstractions on the land directly underlying the viaduct; however, there are four groundwater abstractions recorded within 1km of the site. The nearest groundwater abstraction is recorded 306m north of the site, the abstraction is recorded as historical. The groundwater was abstracted for transfer between sources (post Water Act 2003). The remaining three groundwater abstractions are all recorded as historical and utilised for the purposes of cooling.

It should be noted that the data search has not included identification of unlicensed water supplies abstracting less than $20m^3$ of water per day (for abstractions below $20m^3$ per day, a licence is not required provided that the abstraction is part of a single operation).

3.2.2 Groundwater Source Protection Zones

Groundwater Source Protection Zones (SPZs) are defined around abstraction boreholes used for potable water supply, to delineate the area where release of a contaminant into the aquifer could impact on the abstraction[7]. The site is not located within an SPZ, the nearest SPZ is located 474m east of the site and is designated as a Zone III Total Catchment.

3.3 Hydrology

3.3.1 Hydrology and Drainage

Information provided in the Groundsure Insights Report (Appendix B) indicates that the Bridgewater Canal basin complex is located below the viaduct and this basin complex extends to the north and south. Off-site, the Rochdale Canal (located approximately 40m south of the site) can flow into the Bridgewater Canal via opening a lock gate. The Rochdale Canal terminates at a lock approximately 35m west of Castle Street which crosses the canal. The canal basin complex connects (off-site) to the River Medlock at a point approximately 250m west of the site and joins the River Irwell approximately 280m north west of

[7] *The Inner Zone (Zone 1) is the most sensitive and certain potentially hazardous activities are restricted in this area. Outside this are the Outer Zone (Zone 2) and the Total Catchment (Zone 3) which indicates the recharge area that contributes to the water.*

the site. The River Medlock is located approximately 40m west of the site at the closest point, the river flows in a western direction and then to the south where is flows below the Dawson Street (Egerton Road) before flowing into the River Irwell further west.

The site is located within the WFD surface water body catchment of Medlock (Lumb Brook to Irwell) (Water Body ID: GB112069061152). Information on the Medlock (Lumb Brook to Irwell) has been collated from the EA's Catchment Data Explorer[8]. The overall water body classification of the waterbody was moderate, with a chemical rating of fail and an ecological rating of moderate in 2019. The EA's Catchment Data Explorer indicates that the chemical substances which have failed assessment criteria include: cypermethrin, polybrominated diphenyl ethers (PBDE), perfluorooctane sulphonate (PFOS) and mercury and its compounds.

3.3.2 Surface Water Abstractions

Information provided within the Groundsure Insights Report (Appendix B) indicates that there are no surface water abstractions on the land directly underlying the viaduct. Two historical surface water abstractions are recorded approximately 400m south-west of the site with the surface water body recorded as the River Irwell, the water was abstracted for the purpose of general cooling. There are no additional surface water abstractions located within 1km of the site boundary.

It should be noted that the data search has not included identification of unlicensed water supplies abstracting less than 20m^3 of water per day (for abstractions below 20m^3 per day, a licence is not required provided that the abstraction is part of a single operation).

3.3.3 River Flood Zones

The Groundsure Insights Report (Appendix B) indicates the land directly underlying the viaduct is an area with a high risk of flooding. The chance of flooding from rivers for high risk areas is greater than or equal to a 1 in 30 chance.

The Groundsure Insights Report also indicates that the land directly underlying the viaduct is located within a Flood Zone 2 area which indicates a 1 in 1000 (0.1%) chance of flooding each year.

3.4 Sensitive Land Use

Information contained within the Groundsure Insights Report (Appendix B) indicates that the site is not located within 250m of a Site of Special Scientific Interest (SSSI), Ramsar Site, Special Area of Conservation (SAC), Special Protection Area (SPA), National or Local Nature Reserve (NNR/LNR) or Ancient Woodland. The nearest designated site to the site is the Trafford Ecology Park LNR located approximately 3.5km to the west.

There are no Nitrate Vulnerable Zones (NVZs) located within 250m of the site. The nearest NVZ, Irwell / Manchester Ship Canal (Kearsley to Irlam Locks) NVZ, is located is located approximately 784m north-west of the site.

The viaduct structure is a Grade II listed structure which was constructed c. 1880. The viaduct is composed of cast iron and wrought iron with cast iron drum piers rising to square castellated towers supporting metal lattice parapets[9].

[8] *https://environment.data.gov.uk/catchment-planning/WaterBody/GB112069061152*
[9] *https://historicengland.org.uk/listing/the-list/list-entry/1292315*

4 Historical Land Use and Regulatory Information

4.1 Site History

Historical OS maps contained within the Groundsure Insights Report (Appendix B) and a summary of the sites heritage within the Castlefield Viaduct story book by Twelve Architect, July 2020 have been reviewed to identify potentially contaminative former land uses within the site boundary, directly underlying the viaduct and within 1km of its surroundings.

The Castlefield Viaduct was constructed in 1893 to carry heavy rail traffic in and out of Manchester Central Station (now Manchester Central convention complex). The viaduct had three rail tracks to carry rail traffic. The viaduct cost £250,000 to construct equal to £20 million today. Manchester Central Station closed in 1969 and the viaduct fell into disuse with the tracks later dismantled. The viaduct has been derelict since then.

Prior to the creation of the viaduct, a timber wharf was present on the land underlying the viaduct from the earliest available mapping (1848). In addition to the timber wharf, part of the land underlying the viaduct was occupied by rectangular warehouses from the earliest available OS mapping (1848) until the 1990s, these buildings also extended to the north of the viaduct.

The area below and surrounding the viaduct has a long history of both industrial and commercial activities since the earliest available mapping to the present day. A number of residential properties have also surrounded the site, also since the earliest available mapping to the present day. Commercial and industrial activities that have been recorded within 500m of the site include railways, quaysides, wharves, gravel and sand pits, dye works, chemical works, papermills and abattoirs.

It should be noted that the historical maps within the Groundsure Insight Report represents an area greater than that illustrated on Figure 1.2; however, Table 4-1 has been divided to show the features ‘on-site’ (within the viaduct – the site), ‘features on land directly underlying the viaduct’ and ‘off-site features within 500m of the site’.

Table 4-1: Historical Land Use

Map Dates	On-site features	Features on land directly underlying the viaduct	Off-site features (within 500 m of the site)
1848 (OS map 1:10,560)	Viaduct not constructed.	Three rectangular warehouses on the banks of two canal basins, occupy the land that today underlies the western half of the viaduct. Two smaller square buildings are located to the east of the warehouses, beyond which is a branch of a canal which extends off-site in a north – south direction. To the east of the canal, part of another rectangular building is present. To the east of the building is a pathway and an area labelled as an 'Ancient Site of Roman Mamucium' site. A timber wharf is located to the south of the two square buildings and is adjacent to a canal orientated in a west to east direction.	The two rectangular warehouses extend predominantly to the north but also to the south of the current site boundary. The large rectangular building to the east of the canal extends to the south of the current site boundary, as does the canal which extends to the south of the site before joining a larger canal which is orientated in a west to east direction. The canal (north – south orientation) continues southwards before also changing orientation from west to east. On the southern side of the canal 'Castle Quay Slate Wharf' is labelled (approximately 20m south of the current site boundary). At the southern edge of the wharf is a rectangular building labelled as a 'warehouse'. To the west of the wharf a gravel pit is recorded (approximately 40m south of the current site boundary). Castle Quay is recorded to the south of the canal (approximately 150m south of the current site boundary), a rectangular building labelled 'warehouse' and two smaller square to rectangular shaped buildings are shown to the south and east of the quay. A sand pit, St Georges Church and a saw mill are recorded to the south-west of the site (approximately 140m). Beyond these features and the warehouses described above are a large number of terraced houses. To the west of the site is vacant land, a tributary of the River Irwell, beyond which residential houses and Victoria Quay is labelled (300m to the west of the current site boundary). The

Map Dates	On-site features	Features on land directly underlying the viaduct	Off-site features (within 500 m of the site)
			Quay is adjacent to the River Irwell which flows in a south-west to north east direction 325m to the west of the site). On the western side of the river is the Sunny Side Silk and Cotton Mill (approximately 350m west). To the north of the current site boundary, is the tributary of the River Irwell, beyond which is a paper mill (150m north of the site). Beyond the paper mill is a chemical works, New Quay and Dye Works all of which are located on the southern edge of the River Irwell (approximately 300m north of the site). A cotton mill is recorded on the western bank of the River Irwell, approximately 350m north-west of the site. A railway is located approximately 250m north of the site at its closest point. The area to the east of the site is densely populated with terraced housing. A cotton mill is recorded approximately 500m east of the site.
1851 (OS map 1:1,056)	Viaduct not constructed.	The warehouse (partially located on the land which today directly underlies the site), to the east of the canal, is recorded as Kenworthy's Warehouse. A line labelled 'centre of the of course of the River Medlock', is shown under the site, orientated in a roughly north to south direction and extends beyond the site boundary to the north and south.	A timber yard is recorded to the immediate north of the timber wharf with a crane also recorded, a dock yard and smithy are recorded to the north of the timber yard approximately 20m north of the current site boundary. A coal wharf is recorded approximately 80m north of the site. Kenworthy's Dock Yard and a sail cloth manufactory are recorded to the east of the coal wharf (approximately 50m north of the site). A smithy is recorded on the Castle Quay Slate Wharf (approximately 100m south of the site).

Map Dates	On-site features	Features on land directly underlying the viaduct	Off-site features (within 500 m of the site)
			A timber yard is recorded adjacent to the gravel pit.
1876	Viaduct constructed	No records.	
1891 (OS map 1:500)	Viaduct not yet shown on historical mapping.	The timber wharf is no longer recorded. The two square buildings are no longer recorded.	Two sets of railway lines are recorded running adjacent to the site, both running in a west to east orientation. The timber yard to the north of the site is labelled 'wharf' and there has been an increase in the number of buildings present in the dock yard.
1893 (OS map 1:2,500)	Viaduct not yet shown on historical mapping.	No significant changes.	The railway extends to the west and east. The Castle Quay Slate Wharf and Castle Quay are now referred to as Castle Field Wharves. The smithy is no longer recorded. Four travelling cranes are recorded in this area. Both the gravel and the sand pit are no longer shown. Abattoirs are recorded approximately 150m north of the site and a paper mill located to the north of the site is now labelled 'Elm Street Mill, disused' A timber wharf is recorded approximately 30m south of the site. Castle Field Iron Works are recorded approximately 100m south of the site boundary. A series of mills and works are recorded 100m south west of the site including 'Hulme Mill', 'Egerton Works (Cabinet). 'Worsley Mills (Braid)' and a cotton mill. The timber yard is recorded adjacent to the gravel pit is no longer recorded.

Map Dates	On-site features	Features on land directly underlying the viaduct	Off-site features (within 500 m of the site)
1894 – 1896 (OS map 1:10,560)	The viaduct is shown with one railway line running the entire length of the site in a west to east orientation. The tracks connect to Central Station.	A railway line has been constructed and runs beneath the viaduct (Manchester South Junction and Altrincham Railway).	The Manchester South Junction and Altrincham Railway extended to the north west and south east of the site. To the east of the site a large station is recorded (approximately 400m east of the site). Seven additional rectangular buildings are recorded between the former Castle Quay Slate Wharf and Castle Quay. The chemical works, New Quay and Dye Works approximately 300m north of the site has been redeveloped into a corporation yard. A station is recorded approximately 500m north of the site. The number of railway lines to the north of the site has increased with some smaller lines connecting to large warehouses. The cotton mill recorded approximately 500m east of the site in no longer labelled. Sunny Side Silk and Cotton Mill is no longer recorded.
1905 – 1906 (OS map 1:10,560)	No significant change.		The large station located approximately 400m east of the site is divided into Central Station and two goods stations. An iron works is recorded approximately 400m west of the site adjacent to a railway line. A gas works is located approximately 425m east of the site.
1908 (OS map 1:2,500)	Three sets of railway track are shown to cross the site.	No significant change.	Elm Street Mill located 150m north of the site is no longer shown. It has been replaced by an expansion of the abattoirs.

Map Dates	On-site features	Features on land directly underlying the viaduct	Off-site features (within 500 m of the site)
1922 (OS map 1:2,500)	No significant change.	A tank is labelled directly north of the site boundary. Directly beneath the site and extending to the north, south and east a rectangular shape is outlined labelled 'Site of Roman Fort'.	'Hulme Mill' and 'Egerton Works (Cabinet) located 100m to the south west of the site are no longer shown and have been replaces by a 'Paper Store'.
1923 (OS map 1:10,560)	No significant change.		'Knott Mill' is labelled 250m south east of the site. The iron works recorded approximately 400m west of the site is no longer recorded however the building remains. A hospital is recorded approximately 380m north east of the site.
1931 – 1932 (OS map 1:10,560 & 1:2,500)	No significant change.	Two of the rectangular warehouses directly beneath the site are recorded as 'Acid Warehouse'. The tanks directly north of the site is no longer shown.	The two rectangular warehouses that extend to the north and south of the current site boundary are recorded as 'Acid Warehouses'. Kenworthy's Dock Yard and a sail cloth manufactory are no longer recorded (approximately 50m north of the site) and have been replaced by a large warehouse. A 'Printing Works' is located 90m north east of the site boundary. 'Castle Field Iron Works' located 50m south of the site is no longer shown and has been replaced by 'Saw Mills', 'Saw Mill and Joinery Works' and 'Castlefield Works (Paper)'. Three small circular silos are recorded adjacent to 'Canal Flour Mill' located approximately 80m south of the site. An 'Electrical Engineering Works' is located 200m south-west of the site.

Map Dates	On-site features	Features on land directly underlying the viaduct	Off-site features (within 500 m of the site)
			'Worsley Mills' are now labelled as manufacturing cardboard boxes. The corporation yard 300m to the north of the site is now labelled as a cleansing depot. A mineral yard is recorded approximately 400m north west of the site.
1938 (OS map 1:10,560)	No significant change.		
1949 (OS map 1:2,500 & 1:1,250)	The site is recorded as a 'Viaduct'.	One of the rectangular warehouses beneath the site is no longer shown and has been replaced by a smaller building.	A cold storage warehouse is located within the area occupied by the abattoir, as is a wholesale meat market (120m north of the site). A 'Saw Mill' and 'Works' are labelled 100m north of the site. A hide and skin works are recorded in the dock yard of the former timber yard (approximately 70m north of the site). A hide, skin and fat market is recorded approximately 180m north west of the site. A 'Boat Repair Works' is recorded north of the warehouse 50m north of the site in the location of the former Kenworthy Dockyard. An electricity sub-station is labelled adjacent to the print works 90m north of the site. A fibreboard container factory is recorded approximately 120m south west of the site replacing the former 'Worsley Mills'.

Map Dates	On-site features	Features on land directly underlying the viaduct	Off-site features (within 500 m of the site)
			The large rectangular building to the east of the canal is no longer shown. Castlefield Wharves are no longer recorded. A shaft is recorded approximately 40m south of the viaduct approximately 50m west of the lock gate at the end of Rochdale Canal. A 'Refuse Heap' is labelled 150m south of the site.
1956 (OS map 1:1,250)	No significant change.		An automobile engineering works is recorded approximately 200m north east of the site. A ready mixed concrete depot is recorded approximately 80m north of the site. The 'Boat Repair Works' are no longer recorded. The' Refuse Heap' 150m south of the site is no longer recorded.
1956 (OS map 1:10,560	No significant change.		An automobile engineering works is recorded approximately 400m south-east of the site.
1960 - 1963 (OS map 1:2,500 & 1:1,250)	No significant change.	The acid warehouses are now recorded as warehouses.	The two rectangular warehouses that extend to the north and south of the current site boundary are now recorded as warehouses. The fibreboard container factory is recorded as a factory. A 'Garage' is labelled adjacent to the north east of the site. A second 'Garage' is labelled 25m to the south of the site.

Map Dates	On-site features	Features on land directly underlying the viaduct	Off-site features (within 500 m of the site)
			The shaft, recorded approximately 40m south of the viaduct, is labelled as disused. The automobile engineering works located approximately 200m east of the site is recorded as a 'Works'. The 'Printing Works' located 90m north east of the site boundary are no longer recorded. The 'Electrical Engineering Works' is located 200m south west of the site are no longer recorded. The hide and skin works recorded approximately 70m north of the site are no longer recorded.
1972 (OS map 1:10,000)	The railway track across the viaduct is shown in the western half of the site only and is no longer connected to Central Station.	No significant change.	Central Station is no longer labelled and the railway tracks which travelled from the site and towards the station and goods shed appear to have been dismantled and are only partially shown. A junction/roundabout is recorded approximately 300m south of the site. 'Knott Mill' is no longer recorded, the building is labelled as 'Works'. The automobile engineering works recorded approximately 400m south east of the site are no longer recorded, a works is recorded in its place.
1977 - 1982 (OS map 1:1,250 & 1:10,000)	The railway on the viaduct is recorded as dismantled.	Kenworthy's Warehouse appears to have demolished.	The abattoir is no longer recorded, the number of buildings has reduced and now three large rectangular buildings occupy the space.

Map Dates	On-site features	Features on land directly underlying the viaduct	Off-site features (within 500 m of the site)
			A building labelled 'Refuse Destructors' is shown in the cleansing depot. Four rectangular and square buildings are recorded to the west of the warehouses, immediately adjacent to the northern boundary of the site. A hopper, conveyors and an electricity substation are shown immediately to the north east of the site. Central Station to the east of the site is recorded as disused, as is one of the goods stations. The other goods station is recorded as a car park. The hide, skin and fat market is no longer recorded.
1985 (OS map 1:10,000 & 1:1,250)	No significant change.		The works in the location of 'Knott Mill' are no longer recorded. The works located on the site of a former automobile works are no longer recorded. The disused goods station to the east of the site is recorded as a car park.
1986 (OS map 1:1,250)	No significant change.		A garage is recorded approximately 80m north of the site in the area formerly occupied by a timber yard.
1988 (OS map 1:10,000)	No significant change.		An exhibition centre is recorded in the location of the disused central station. No. 2 dock is no longer recorded to the south-west of the site.

Map Dates	On-site features	Features on land directly underlying the viaduct	Off-site features (within 500 m of the site)
			The mineral yard located approximately 400m north-west of the site is no longer recorded. The hospital located to the north-east of the site is no longer recorded. The gas works located to the east of the site is now recorded as a car park.
1990 – 1995 (OS map 1:1,250 & 1:10,000)	No significant change.	The two former acid warehouses are no longer recorded.	The two rectangular warehouses that extend to the north and south of the current site boundary are no longer recorded. The cleansing depot and refuse destructor is no longer recorded. An electricity substation is recorded approximately 170m north of the site. The cotton mill on the western bank of the River Irwell, approximately 350m north-west of the site is no longer shown. The shaft is no longer recorded to the south of the viaduct. Two new large buildings are recorded approximately 180m north west of the site. The garage to the east of the former acid warehouses is no longer recorded.
2001 (OS map 1:10,000)	No significant change.		Exhibition Centre is recorded as the Greater Manchester Exhibition Centre (GMEX). The building housing the former iron works (located approximately 400m west of the site) is recorded as a bus depot.

Map Dates	On-site features	Features on land directly underlying the viaduct	Off-site features (within 500 m of the site)
2010 (OS map 1:10,000)			The GMEX is renamed as the Manchester International Convention Centre (MICC).
2021 (OS map 1:10,000)			No significant change.

4.2 Regulatory Information

Regulatory information relating to potentially contaminative activities within the vicinity of the site has been summarised in Table 4-2. Further details are provided in the Groundsure Insights Report in Appendix B.

Table 4-2: Regulatory Information

Environmental Records	Description
Discharge consents	There are no recorded discharge consents located on the site; however, there are 51 discharge consents located within 500m of the site. The closest discharge consent is located 44m north-east of the site and relates to the discharge of sewage discharge – final/treated effluent with the receiving water listed as the Bridgewater Canal. The discharge consent is recorded as revoked.
Pollution incidents	There are no recorded pollution incidents located with the site; however, there are seven recorded within 500m of the site. The closest pollution incident occurred 172m north-west of the site in June 2001; the pollutant involved is recorded as diesel which had a minor impact to water (Category 3 incident).
Registered landfill, historical landfill or other waste disposal sites	The EA records show that there are no active landfills within 500m of the site. There is one recorded historical landfill located within 500m of the site. The landfill is located 352m north-west of the site. The type of waste the site was permitted to accept is not recorded within the information reviewed neither is information relating to the operation dates. There is one historical waste site that is located immediately adjacent to the northern boundary of the site (NGR: 383070, 397665). The record relates to a scrap yard, details of the licence holder and dates of operation are not included in the information reviewed. A second historical waste site is located 11m south-west of the site (NGR: 382825, 397578), the waste site is also recorded as a scrap yard with details of the licence holder and dates of operation are not included in the information reviewed. There are an additional 39 records of historical waste sites located within 500m of the site. There are three records of licensed waste sites located within 500m of the site, two of which are recorded as active and one inactive. All sites are located 164m north-west of the site and relate to mobile plant. The active licences are held by R E M Mobile Plant and Rec Remediation Ltd – Mobile Plant, the licences were issued in December 2006 for both sites.
Waste exemptions	There are 57 waste exemptions recorded within 500m of the site. The nearest exemption is for a site located 69m south of the site;

Environmental Records	Description
	the description of the activities undertaken is recorded as sorting and de-naturing of controlled drugs for disposal.
Integrated pollution prevention and control authorisations	There are no integrated pollution control records within 500m of the site.
Hazardous substances consents and handling notifications	There are no records of hazardous substances consents and handling notification recorded within 500m of the site.
Control of major accident hazards sites (COMAH)	There are no records of control or major accident hazard sites recorded within 500m of the site.
Registered radioactive substances	There are no records of registered radioactive substances recorded within 500m of the site.
Historical garages	There are three records of historical garages located below the site; additional details on the garages are not included within the information reviewed. There are an additional 89 records of historical garages located within 500m of the site.
Historical tanks	There is one record of an unspecified tank located below the site. There are an additional 157 records of historical tanks located within 500m of the site, these include: ■ unspecified tanks – 123 records; ■ tanks – 27 records; ■ gas works – 5 records; and, ■ gasometer – 2 records.
Historical energy features	There are 128 records of historical energy features located within 500m of the site, these include: ■ electricity substation – 117 records; ■ electricity transformers – 4 records; ■ gas works – 5 records; and, ■ gasometer – 2 records.
Recent industrial land uses	According to the Groundsure Insights Report, there are no records of recent industrial land uses on the site or underlying the site. Off-site recent industrial land uses within 500m of the site include: ■ conveyors (7m north-west); ■ hoppers and silos (16m north-west); ■ moorings and unloading facilities (23m south, 28m south, 34m north-east, 49m east, 151m south-west, 151m south, 172m south, 196m south-east); ■ scrap metal merchants (27m west); ■ unspecified works or factories (28m north-west);

Environmental Records	Description
	■ container and storage (38m north-west, 70m south, 98m south, 198m north-west, 204m south); ■ electrical features (79m north-east, 98m north, 132m south, 145m north-west, 162m north, 184m south-east, 202m north west, 208m west, 237m north-east); ■ tanks (95m south); ■ published goods (133m north-east, 194m south-east, 202m east); ■ travelling cranes and gantries (174m north-east); ■ special purpose machinery and equipment (183m north-east); ■ civil engineers (183m north-east); ■ tram, metro, light railway stations and stops (198m east); ■ recording studios and record companies (229m south-west); and, ■ railway stations, junctions and halts (244m south-east). There are three records of current or recent petrol stations located within 500m of the site. Two of the records relate to obsolete petrol stations located 96m south and 321m south of the site. An active petrol station (Sainsbury's) is recorded 458m north west of the site.
Historical industrial land uses	The following historical industrial land uses are recorded on or underlying the site: ■ wharves (including a timber wharf); ■ railway building ■ railway sidings; ■ quay; ■ unspecified depots; and, ■ unspecified ground workings. Within 500m of the site, the following historical industrial land uses are recorded: ■ railway buildings (64 records, closest recorded 0m north east of the site); ■ railway sidings (31 records, closest recorded 3m north-east of the site); ■ unspecified depot/commercial/industrial (35 records, closest recorded 19m north-east of the site); ■ gravel/sand pits (2 records, gravel pit located 41m south-east of the site, sand pit located 164m south of the site);

Environmental Records	Description
	■ wharves (2 records, closest recorded 64m south of the site); ■ warehouses (5 records, closest recorded 69m south-east of the site); ■ unspecified ground workings (5 records, closest recorded 77m south of the site); ■ quay/docks (7 records, closest recorded 87m south of the site); ■ paper mill (1 record, recorded 108m north-west of the site); ■ goods shed/depot/station (15 records, closest recorded 135m north of the site); ■ corporation yard (5 records, closest recorded 176m north-west of the site); ■ unspecified mills (4 records, closest recorded 178m south-west of the site); ■ cleansing depot (2 records, closest recorded 181m north-west of the site); ■ refuse heap/unspecified heap (3 records, closest recorded 188m north-west of the site); ■ chemical works (1 record, located 200m north-west of the site); ■ automobile works (1 record, located 228m south of the site); ■ unspecified works (12 records, closest located 228m south of the site); ■ brewery (2 records, closest recorded 234m north-west of the site); ■ iron works (3 records, closest recorded 253m south-west of the site); ■ dye works (2 records, closest recorded 272m north of the site); ■ silk and cotton mill/cotton mill (4 records, closest recorded 280m west of the site); ■ saw mill (1 record, located 312m south-west of the site); ■ railway stations (13 records, closest recorded 198m east of the site); ■ unspecified tank (6 records, closest recorded 371m south of the site); ■ hospital (9 records, closest recorded 385m north-east of the site); ■ mineral yard (3 records, closest recorded 410m north-west of the site);

Environmental Records	Description
	■ gas works/gasometer (6 records, closest recorded 424m east of the site); ■ bus station (1 record, located 440m east of the site); and, ■ glass works (1 record, located 486m south-east of the site).
List 1 dangerous substances	There are no List 1 dangerous substances records within 500m of the site.
List 2 dangerous substances	There are no List 2 dangerous substances records within 500m of the site.

5 Conceptual Site Model and Qualitative Risk Assessment

Land contamination is assessed through the identification of Potential Contaminant Linkages (PCLs). The assessment involves the development of a Conceptual Site Model (CSM) which describes the relationship between on and off-site potential sources of contamination (and contaminants), potential receptors to such contamination and anticipated pathways between the two. Where all three (source-pathway-receptor linkage) are present or considered to be present, they are described as a PCL which can be subject to the risk assessment process.

The following discusses the potential sources, pathways and receptors present.

5.1 Potential Sources

The Castlefield Viaduct has been used as railway land since its construction in 1876. The site is currently covered in ballast and the railway and associated sleepers appear to have been removed from the site. During the site walkover, paint flakes, which given the likely age of the paint potentially could contain metals such a lead and cadmium, were observed on the surface of the ballast and appeared to be flaking off of the viaduct structure. Asbestos containing materials were not observed on the viaduct structure at the time of the site walkover, although they may have been present in the past. It is noted within the 'Castlefield Viaduct Appendix A' document, provided by the Trust that in 2010 a de-scaling operation (with some painting) was undertaken to help prevent corrosion, and further works were carried out in 2012/13 to remove other potentially hazardous debris.

The land directly underlying the viaduct has been historically occupied by warehouses (also recorded as acid warehouses). The warehouses extended to the north of the viaduct. The land to the north of the viaduct formerly occupied by the warehouses has been recently redeveloped/is undergoing redevelopment into flats. Due to the recent nature of the redevelopment underlying this part of the site, investigation and assessment of the land for contamination will have been undertaken as part of the planning process. A letter from the EA, dated 8th January 2007 (reference SO/2006/100340/01-L01), relating to the development of the area in which the warehouses where located confirms that a site investigation and risk assessment has been undertaken and states that '*elevated concentrations of petroleum hydrocarbons encountered at the site are unlikely to pose a significant risk to the controlled waters receptors identified. Therefore, we do not require specific remedial action for the protection of controlled waters receptors at this time*'.

It is noteworthy that there is the presence of elevated concentrations of petroleum hydrocarbons underlying the former warehouses which were located beneath the site.

Potential sources of contamination on the viaduct and directly beneath the site are discussed in Table 5-1 and Table 5-2, respectively.

Table 5-1: Potential Sources on the Viaduct Structure

Potential Source	Associated Contaminants
Railway land and ballast (on viaduct structure)	Metals, asbestos, phenols, sulphates, Polycyclic Aromatic Hydrocarbons (PAHs), fuel oils, lubricating oils, greases and herbicides.
Metals and paint flaked off from viaduct structure (on viaduct structure)	Metals

Table 5-2: Potential Sources directly beneath the Viaduct Structure

Potential Source	Associated Contaminants
Made Ground associated with demolished buildings	Made Ground deposits associated with demolished buildings commonly contains localised areas of asbestos, PAHs, fuel and oil hydrocarbons and metals.
Timber wharf (below viaduct structure)	Contaminants of potential concern include metals and metal compounds, cyanides, sulphates, phenols, PAHs, creosote, paints and solvents (aromatic hydrocarbons and chlorinated aliphatic hydrocarbons), organotins, cyanides, biocides, fuels and oil hydrocarbons and asbestos.
Scrap metal yard (below viaduct structure)	Metals and metal compounds, cyanides, sulphates, phenols, PAHs, paints and solvents (aromatic hydrocarbons and chlorinated aliphatic hydrocarbons), fuels and oils, hydrocarbons and asbestos.
Former warehouses	Petroleum hydrocarbons.

Several current and historical activities undertaken within 500m of the site may have released contaminants into the ground, which may have subsequently migrated to the land underlying site via surface run-off and/ or migration in groundwater. These are identified in Table 5-3 below.

Table 5-3: Potential Off-site Sources

Potential Source	Associated Contaminants
Railway lines and travelling cranes	Fuel and oil hydrocarbons, metals and metalloids, PAHs, asbestos, sulphates and sulphides.
Dockyard and timber yard (immediately adjacent to the site)	Contaminants may be associated with materials to construct the dock and historical activities which may have taken place within the dockyard. Potential contaminants of concern include metals, phenols, PAHs, creosote, solvents, tributyltin, fuels and oils, asbestos and ground gases.
Garages (immediately adjacent to the site)	Fuel and oil petroleum hydrocarbons, volatile and semi-volatile organic compounds (VOCs and SVOCs) and vapours associated with above ground fuel tanks (if present).
Made Ground associated with demolished buildings and potentially infilled land former gravel and sand pits, former shaft)	Made Ground deposits associated with demolished buildings commonly contains localised areas of asbestos, PAHs and metals.
Other off-site industrial use: ■ Scrap metal yard ■ Abattoir ■ Silk and cotton mills ■ Paper mills ■ Automobile engineering works ■ Iron works ■ Smithy ■ Fibreboard container factory	Metals and metal compounds, phenols, PAHs, solvents (aromatic hydrocarbons and chlorinated aliphatic hydrocarbons), fuels and oil hydrocarbons and asbestos.

Potential Source	Associated Contaminants
■ Cleansing depot ■ Concrete depot ■ Refuse heap ■ Saw mill ■ Dye works ■ Bus Station ■ Hospital ■ Brewery ■ Glass works ■ Mineral Yard ■ Gas works ■ Garages ■ Potentially infilled shaft	

5.2 Potential Receptors and Pathways

Three potential scenarios have been identified in relation to the use of the site, these include:

- the site in its current condition (current CSM);
- the site during the Phase 1 'Pilot Scheme' being utilised as a 'micro park' this includes the introduction of a temporary footpath surface, the erection of temporary pop up shelters (assumed to be well ventilated) and placement of planters (Phase 1 Pilot Scheme CSM); and
- the site when it is permanently repurposed in Phase 2 as an urban park and travel hub. This will include the construction of food and beverage stands, gardens, stalls, seating areas, an events space and toilet facilities. It is assumed that raised planting beds will be created and a pathway between railway ballast and consumption of site grown vegetables is not considered (Phase 2, Permanent Urban Park and Travel Hub CSM).

Table 5-4 below outlines which potential receptors and pathways that would be associated by each of the three scenarios.

Table 5-4: Potential Receptors and Pathways

Receptors	Pathways	Current CSM	Phase 1 - Pilot Scheme CSM	Phase 2- Permanent Urban Park and Travel Hub CSM
Human Health				
Site users (visitors, trespassers and future workers and visitors)	Direct exposure through dermal contact, ingestion or inhalation of contaminants within the ballast cover across the viaduct or accidental direct exposure to paint flakes in areas not covered by future temporary walkway or other hard cover.	✓	✓	✓
	Inhalation of volatile contaminants.	X	X	✓
Development workers during construction	Direct exposure through dermal contact, ingestion or inhalation of ballast cover or paint flakes.	X	✓	✓
	Inhalation of volatile contaminants.	X	✓	✓
Controlled Waters				
Chester Pebble Bed Formation – Principal Aquifer	Migration via preferential pathways caused by piling (if required).	X	X	✓
Bridgewater Canal (below the viaduct and in immediate surrounding area)	Leaching, dissolution and migration of contaminants from the ballast covering the site via surface drainage and discharge into surface water receptors.	✓	✓	✓
River Medlock (40m west of the site)		✓	✓	✓
Buildings and Utilities				
Future buildings and utilities	Direct contact and permeation of water supply pipes.	X	X	✓

5.3 Preliminary Conceptual Site Model and Qualitative Risk Assessment

The CSM and PRA are presented in Table 5-5, Table 5-6 and Table 5-7 for each of the potential end use scenarios. Definitions of probability and consequence have been based on guidance outlined in CIRIA 552 and summarised in Appendix F. A combination of probability and consequences produces a risk level based on the risk evaluation and likely action required. The land contamination risk, which is a function of the probability and the consequence, can then be defined using the risk matrix. The limitations associated with the assessment are provided in Appendix G.

Table 5-5: Preliminary Conceptual Site Model for Current Use

Source	Pathway	Receptor	Associated hazard	Potential consequence of contaminant linkage	Likelihood of contaminant linkage	Risk classification	Justification
Historical site use as railway land, ballast layer covering viaduct and paint on the viaduct.	Direct exposure through dermal contact, ingestion or inhalation of ballast, paint flakes and associated dusts.	Site visitors and trespassers	Health risk	Medium	Low likelihood	Moderate to low risk	The viaduct is covered with a layer of ballast which may contain contaminants as a result of its historical use as railway land. In addition, the viaduct is painted, and flakes of paint were observed within the ballast. Given the likely age of the paint, these may contain elevated concentrations of metals. The site is visited infrequently by maintenance workers to undertake vegetation clearance. Site visitors may come into direct contact with contaminants within the ballast, but this will be on an infrequent basis. During the site walkover it was observed that the site was used by trespassers. These site users may also come into direct contact with contaminants within the ballast covering the surface of the viaduct.
	Leaching of contaminants and migration via surface water network.	Bridgewater Canal and River Medlock	Pollution of controlled waters	Medium	Low likelihood	Moderate to low risk	Contaminants have the potential to leach out of the ballast which covers the top of the viaduct and migrate via the surface water drainage network into the surrounding surface water.

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Table 5-6: Preliminary Conceptual Site Model for Phase 1 - Pilot Scheme

Source	Pathway	Receptor	Associated hazard	Potential consequence of contaminant linkage	Likelihood of contaminant linkage	Risk classification	Justification
Historical site use as railway land, ballast layer covering viaduct and paint on the viaduct.	Direct exposure through dermal contact, ingestion or inhalation of soils and dusts.	Future site users	Health risk	Medium	Low likelihood	Moderate to low risk	The viaduct is covered with a layer of ballast which may contain contaminants as a result of its historical use as railway land. In addition, the viaduct is painted, and flakes of paint were observed within the ballast. Given the likely age of the paint, these may contain elevated concentrations of metals. If the site were to be redeveloped site visitors may come into direct contact with contaminants within the ballast if left exposed at surface; however, this is likely to be temporarily or permanently covered by a walkway proposed to be installed covering all or part of the ballast.
		Development workers during construction	Health risk	Medium	Low likelihood	Moderate to low risk	Construction workers may come into direct contact with contaminants within the ballast during development works; however, exposure to potential contaminants can be mitigated during development works associated with the temporary use of the site with the use of appropriate working methods and use of personal protective equipment (PPE).
	Inhalation of volatile contaminants.	Future site users	Health risk	Medium	Unlikely	Low risk	The proposed temporary weather shelters are likely to either have open sides or will be well ventilated due to Covid-19 restrictions. There will be limited potential for the

Source	Pathway	Receptor	Associated hazard	Potential consequence of contaminant linkage	Likelihood of contaminant linkage	Risk classification	Justification
							accumulation of volatile contamination within the structures.
	Leaching of contaminants and migration via surface water network.	Bridgewater Canal and River Medlock	Pollution of controlled waters	Medium	Low likelihood	Moderate to low risk	Contaminants have the potential to leach out of the ballast which covers the top of the viaduct and migrate via the surface water drainage network into the surrounding surface water.

Table 5-7: Preliminary Conceptual Site Model for Phase 2 – Permanent Urban Park and Travel Hub

Source	Pathway	Receptor	Associated hazard	Potential consequence of contaminant linkage	Likelihood of contaminant linkage	Risk classification	Justification
Historical site use as railway land, ballast layer covering viaduct and paint on the viaduct.	Direct exposure through dermal contact, ingestion or inhalation of soils and dusts.	Future site users	Health risk	Medium	Moderate likelihood	Moderate risk	The viaduct is covered with a layer of ballast which may contain contaminants as a result of its historical use as railway land. In addition, the viaduct is painted, and flakes of paint were observed within the ballast. Given the likely age of the paint, these may contain elevated concentrations of metals. If the site were to be redeveloped site visitors may come into direct contact with contaminants within the ballast if left exposed at surface; however, this is likely to be temporarily or permanently covered by a walkway proposed to be installed covering all or part of the ballast.

Source	Pathway	Receptor	Associated hazard	Potential consequence of contaminant linkage	Likelihood of contaminant linkage	Risk classification	Justification
		Development workers during construction		Medium	Low likelihood	Moderate to low risk	Exposure to potential contaminants can be mitigated during construction with the use of appropriate working methods incorporated into a Construction Environmental Management Plan (CEMP) and use of PPE.
	Inhalation of volatile contaminants.	Future site users		Medium	Low likelihood	Moderate to low risk	If the ballast across the viaduct contains volatile contaminants these may accumulate in newly created structures as part of the permanent repurposing of the site.
		Development workers during construction		Medium	Low likelihood	Moderate to low risk	Exposure to potential contaminants can be mitigated during construction with the use of appropriate working methods incorporated into a CEMP and use of PPE.
	Leaching of contaminants and migration via surface water network.	Bridgewater Canal and River Medlock	Pollution of controlled waters	Medium	Low likelihood	Moderate to low risk	Contaminants have the potential to leach out of the ballast which covers the top of the viaduct and migrate via the surface water drainage network into the surrounding surface water.
	Direct contact and permeation of water supply pipes.	Future buildings and utilities	Building and foundation corrosion and impact to potable water supplies	Medium	Low likelihood	Moderate to low risk	Potential contamination could impact on the integrity of concrete foundations through creating aggressive ground conditions. Potential organic contaminants could permeate potable water supplies and have detrimental impacts on human health.

Source	Pathway	Receptor	Associated hazard	Potential consequence of contaminant linkage	Likelihood of contaminant linkage	Risk classification	Justification
Sources below the viaduct and off-site as identified in Table 5-2 and Table 5-3.	Direct exposure through dermal contact, ingestion or inhalation of soils, dusts or vapours.	Development workers during construction if works are required to the viaduct structure at ground level, such as the installation of new access ways or via piling	Health risk	Medium	Low likelihood	Moderate to low risk	Exposure to potential contaminants can be mitigated during construction with the use of appropriate working methods incorporated into a CEMP and use of PPE.
	Creation of preferential migration pathways via piling or construction works at ground level.	Groundwater: Principal Aquifer (Chester Pebble Bed Formation) and surface water receptors (Bridgewater Canal, and River Medlock)	Pollution of controlled waters	Medium	Low likelihood	Moderate to low risk	If construction works are required at ground level such as excavation works or piling, this has the potential to mobilise contaminants within soils or groundwater underlying the site associated with historical activities. Piled foundations, if required, could also potentially create a preferential pathway between sources underlying the viaduct and receptors.

Source	Pathway	Receptor	Associated hazard	Potential consequence of contaminant linkage	Likelihood of contaminant linkage	Risk classification	Justification
	Direct contact and permeation of water supply pipes.	Future buildings and utilities	Building and foundation corrosion and impact to potable water supplies	Medium	Low likelihood	Moderate to low risk	If new foundations are required at ground level to serve the new development, potential contamination in soils underlying the viaduct could impact on the integrity of concrete foundations through creating aggressive ground conditions. If new water pipes are required at ground level to service the viaduct, potential organic contaminants in soils could permeate potable water supplies and have detrimental impacts on human health.

6 Conclusions and Recommendations

6.1 Conclusions

The key objectives of the desk study and PRA were to provide information on the current condition of the site with respect to contamination, characterise the environmental setting and identify potential land quality risks and constraints associated with the proposed scheme.

The site has been a railway viaduct since late 1800s with the railway recorded as being dismantled in the late 1960s. The land underlying the viaduct was historically occupied by a roman fort, timber wharf, canal network and warehouses. The area surrounding the site has a long industrial history including use as railways, quaysides, wharfs, garages, gravel and sand pits, dye works, chemical works, paper mills, gas works and an abattoir.

Information provided by the BGS indicates that the site is underlain by bedrock of the Chester Pebble Bed Formation which is classified as a Principal Aquifer.

Potential sources of contamination on the viaduct were identified as comprising railway land (ballast) and paint from the viaduct structure which may contain contaminants including metals, asbestos, phenols, sulphates, PAHs, fuel oils, lubricating oils, greases and herbicides. The volume of ballast is estimated as approximately 990m^3 based on 0.30m depth, by 330m length and 10m width.

Below the viaduct and in the surrounding area, potential sources of contamination comprise Made Ground associated with demolished buildings, a timber yard and scrap metal yard, dockyards, an abattoir, silk and cotton mills, paper mills, automobile engineering works, iron works, smithy, fibreboard container factory, cleansing depot, concrete depot and a garage.

In relation to the use of the site as an urban park and transport hub, following permanent redevelopment of the site, the following potential risk have been identified as having a moderate risk rating or higher:

- Future site users via direct exposure through dermal contact, ingestion or inhalation of soils and dusts.

Further investigation and assessment of the above identified risk is required to quantify whether this presents a development constraint and to help in the development of appropriate mitigation measures.

6.2 Potential Contaminated Land Development Constraints

Identified potential development constraints and uncertainties relating to contaminated land are summarised as:

- The ballast which covers the viaduct has not been sampled or tested and it is uncertain whether the material contains concentrations of contaminants which have the potential to cause harm to human health or the environment.
- It is unknown whether the paint which covers the viaduct that appears to be in a poor condition, contains lead or other metal contaminants which have the potential to cause harm to human health.
- It is uncertain whether the viaduct surface water drainage system discharges to surface water receptors such as the canal or River Medlock.

- If earthworks or piling is required at ground level as part of the scheme, ground conditions are uncertain and the potential to mobilise contamination during construction and cause harm to human health or environmental receptors is unknown.

6.3 Recommendations

In order to determine whether the railway ballast present on the viaduct is suitable to remain in place upon development, it is recommended that a sampling exercise is undertaken on the fine-grained soil matrix surrounding the coarse stone of the railway ballast. The chemical characteristics of the ballast material can be characterised with the analysis of soil and soil leachate samples. It is anticipated that intrusive investigation will comprise:

- a series of hand dug pits in a grid system along the width and length of the viaduct; and,
- paint sampling exercise from the viaduct structure.

Following the sampling exercise data analysis and interpretation of returned laboratory data can be undertaken, and the CSM can be refined following assessment of risks to human health with respect to the potential future scenario and risks to drinking water pipelines. If the data assessment of the soil and soil-leachate concludes that the material is not suitable to remain on site, land contamination mitigation methods can be recommended which can be included in future repurposing design, or a waste classification assessment can be undertaken to inform suitable disposal options.

The soil sampling exercise also offers a benefit to support understanding potential risk to workers during future construction management planning, and it is recommended that a ballast fines/soil sampling exercise is undertaken prior to the installation of any cover system or walkway.

Considerations for further works are dictated by the elements of the repurposing design. Below provides a non-exhaustive list of considerations that the Trust should make during the evolution process of the feasibility study and permanent design. All recommendations are considered to be conditional on the final design and use of the site:

- Civil engineering – currently an assumption that a bridge proposed for the permanent Phase 2 permanent urban park and travel hub scheme can be supported from the viaduct and piling to provide support is not required. This is subject to change should Historic England find this design unacceptable on a Grade II listed structure. As such, intrusive investigation to obtain soil samples for both geo-environmental and geotechnical purposes will be required at ground level, and assessment of potential risks to controlled waters through piling at as contamination pathway.
- Creating an opening in the base of the viaduct platform - the proposed new bridge would be formed by a gap in the lattice girder structure; however, but other options, such as creation of a hole in the base of the viaduct may be considered. In this case, capture of water collected in the base of the viaduct should be contained to ensure a run off pathway is not created with respect to human health of site users below any aperture.
- Drainage system alterations or improvements from the viaduct may need to be installed and soil leachate analysis from the ballast fines/soil sampling exercise above can support the understanding of the possibility of mobilisation of potential contaminants from the ballast during installation of any new system.
- Installation of drinking water mains – assessment of contaminants potentially present within soils and consideration of isolating future drinking water pipes via barrier pipe or conduit system.
- Installation of permanent structures connected to the soils and accumulation of vapours in permanent poorly ventilated buildings or structures.

- Installation of ‘green stuff’ such as vegetable plots or fruit growing areas – a recommendation is made that any planting is within raised beds disconnected from ballast.
- Painting of the viaduct structure is not currently planned. Deteriorating conditions of the paint works may cause release of metals such as lead, and future painting works may require removal of old paint which could cause a short-term rapid release of metals. Consideration should be made to any proposed method of paint removal and dust management controls should incorporated if required.
- A detailed UXO study is recommended prior to the start of any intrusive works at ground level, as the land underlying the site has been classified as a medium to high risk in relation to UXOs.

7 References

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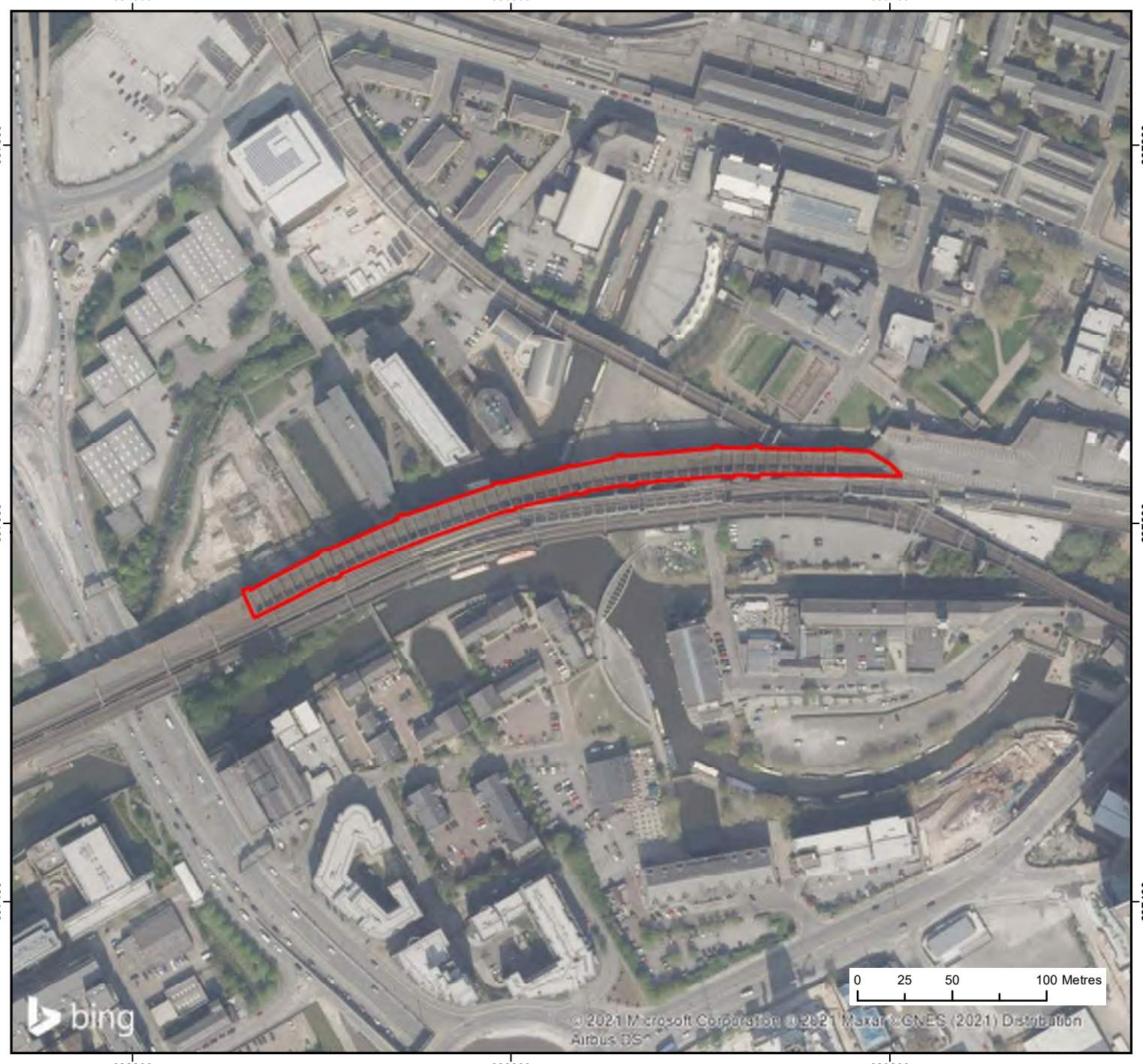
Twelve Architects Castlefield Viaduct Phase Two Temporary Scheme Specification v1.0

Public Health England UK Radon Map. Available at URL: https://www.ukradon.org/information/ukmaps

Figures

Figure 1.1: Site location plan
Figure 2.2: Site layout plan
Figure 3.1: Historical BGS borehole location plan

Royal HaskoningDHV





Legend:

Red Line Boundary

Data Sources: © HaskoningDHV UK Ltd, 2021
Base map: © OpenStreetMap (and) contributors, CC-BY-SA.

Client:	Project:
National Trust	Castlefield Viaduct

Title: Site Location Plan

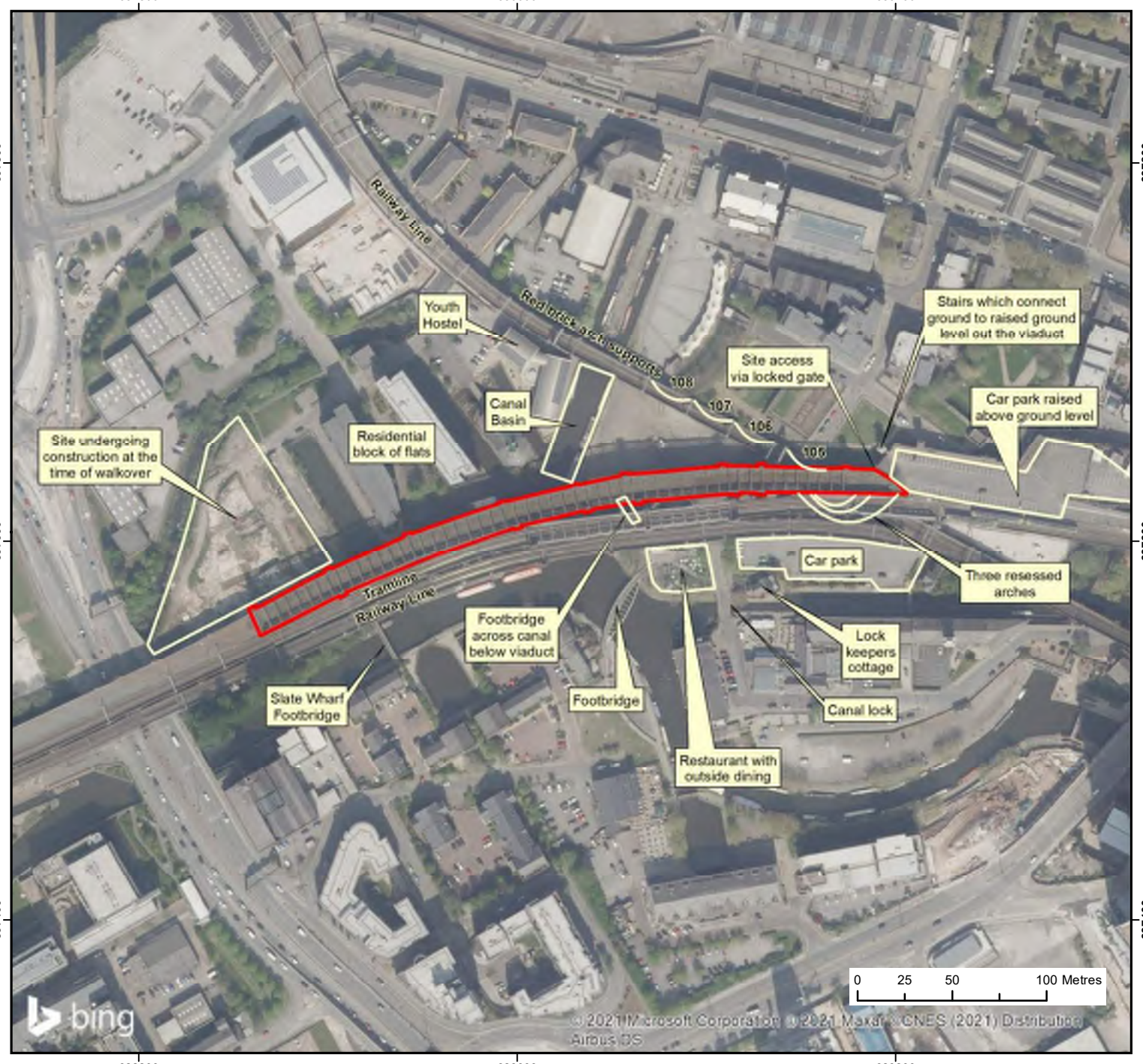
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Revision:	Date:	Drawn:	Checked:	Size:	Scale:
01	28/04/2021	GC	KD	A4	1:3,000

Co-ordinate system: British National Grid

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Legend:

Red Line Boundary

Data Sources: © HaskoningDHV UK Ltd, 2021
Base map: © OpenStreetMap (and) contributors, CC-BY-SA.

Client:	Project:
National Trust	Castlefield Viaduct

Title: Site Layout

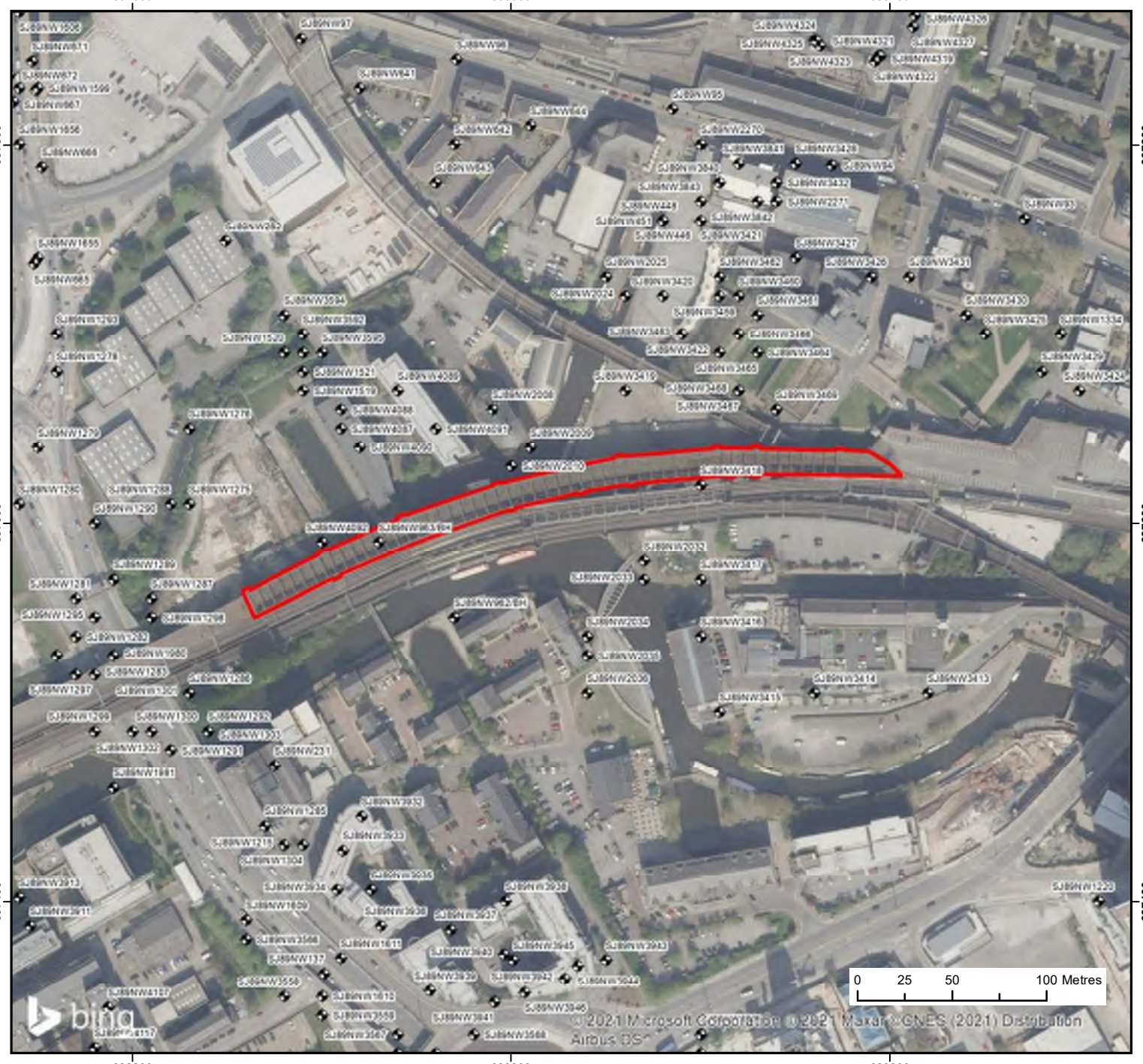
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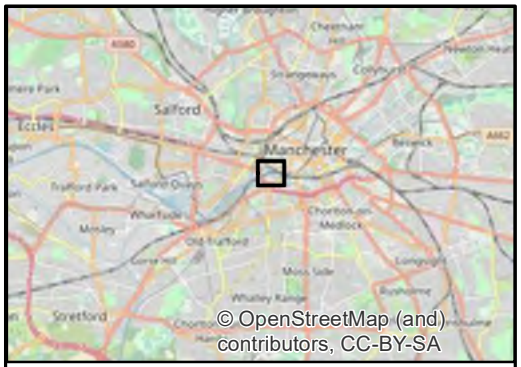
Revision:	Date:	Drawn:	Checked:	Size:	Scale:
01	28/04/2021	GC	KD	A4	1:3,000

Co-ordinate system: British National Grid

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Legend:

- Red Line Boundary
- BGS Borehole Location

Data Sources: © HaskoningDHV UK Ltd, 2021, © BGS, 2021.
Base map: © OpenStreetMap (and) contributors, CC-BY-SA.

Client:	Project:
National Trust	Castlefield Viaduct

Title: Historical BGS Borehole Location Plan

Figure:	Drawing No:
3.1	PC2387-RHD-ZZ-XX-DR-Z-0003

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
01	29/04/2021	GC	KD	A4	1:3,000

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Appendix

Appendix A – Site Walkover Photographic Plates

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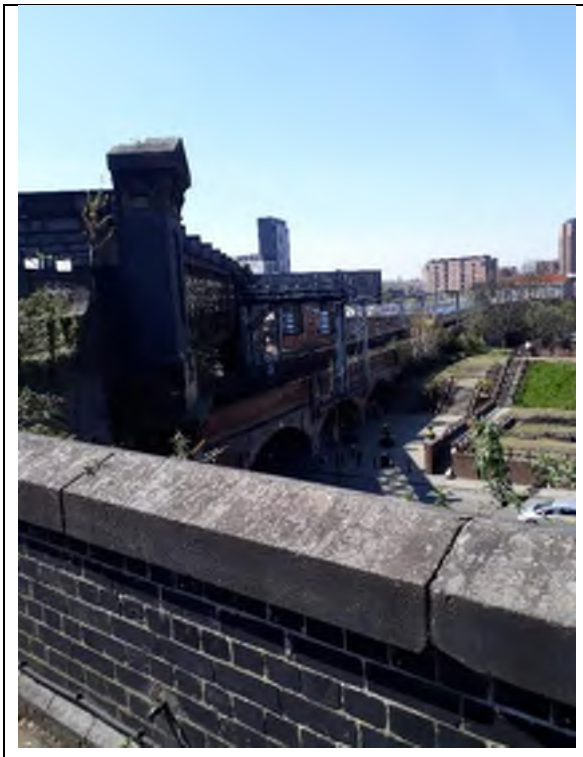
	
Plate 1: View of the site access gate located on the eastern site boundary. The gate is on right hand side of photograph beyond the traffic barrier.	Plate 2: Red brick arches supporting the railway line below the viaduct (looking towards northern boundary).
	
Plate 3: Underside of central/eastern area of the viaduct looking west over Bridgewater Canal basin. Footbridge over canal is shown on the left side of photograph.	Plate 4: Looking north from the southern bank of the Bridgewater Canal towards central area of viaduct. The viaduct is beyond the red brick archway railway line and tramline. The brick structure is a kiosk possibly associated with a car park on northern bank of Bridgewater Canal.

	
Plate 5: Foot bridge over part of the Bridgewater Canal in central/eastern area below viaduct.	Plate 6: Grassed area to north of viaduct along eastern length of viaduct. Staircase shown in left of photograph which provides access from ground level to car park above and viaduct.
	
Plate 7: Car park to east of viaduct looking north from viaduct access point. Lift shown in the left of the photograph.	Plate 8: Eastern area of viaduct looking west. Barrier on northern and southern side of viaduct in this locality which prevents debris falling to the railway line below.

	
Plate 9: Tent and sleeping bag in eastern area of viaduct.	Plate 10: Drainage grid visible on surface of viaduct.
	
Plate 11: Metals structure attached to southern overhead girder.	Plate 12: Variable thickness of ballast with base of viaduct visible in some locations.

	
Plate 13: Moss, grasses and plants cover the surface of the viaduct with some small areas of possible tar/bitumen visible.	Plate 14: Metal and paint fragments visible on the surface of the viaduct which appear to have originated from the overhead beams.
	
Plate 15: Surface of the viaduct with areas of metal plates visible in parts.	Plate 16: Car park to the east of the site looking east. The railway lines of the viaduct ran parallel to the tramline on the east within this area.

	
Plate 17: Water collected in part of the viaduct structure on northern side of structure.	Plate 18: Recessed arches in eastern area below the viaduct looking south to northern side of viaduct.
	
Plate 19: Western end of viaduct looking west with tramline on the left of the photograph.	Plate 20: Car park on the site of the Mamucium Roman Fort to the south of the viaduct, tramline and railway line. Rochdale Canal to south of car park. Former saw mill with chimney to east beyond car park.

	
Plate 21: Northern boundary of viaduct looking west from car park close to site entrance to the east of the site.	Plate 22: Scaffolding and kickboard along areas of viaduct. Looking south to tramline to south of site.

Appendix

Appendix B – Groundsure Insights Report

Royal HaskoningDHV

Groundsure
LOCATION INTELLIGENCE

Enviro+Geo Insight

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Order Details

Date: 01/04/2021

Your ref: PC2387-101-100

Our Ref: GS-7712233

Client: Royal HaskoningDHV

Site Details

Location: 383066 397650

Area: 0.99 ha

Authority: Manchester City Council



Summary of findings p. 2

OS MasterMap site plan p.12

Aerial image p. 8

groundsure.com/insightuserguide

Contact us with any questions at:
info@groundsure.com
08444 159 000

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
13	1.1	Historical industrial land uses	13	9	93	141	-
23	1.2	Historical tanks	1	0	16	65	-
26	1.3	Historical energy features	0	1	14	22	-
28	1.4	Historical petrol stations	0	0	0	0	-
28	1.5	Historical garages	3	5	14	23	-
30	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
31	2.1	Historical industrial land uses	20	18	138	223	-
46	2.2	Historical tanks	1	0	32	125	-
52	2.3	Historical energy features	0	9	37	82	-
57	2.4	Historical petrol stations	0	0	0	0	-
57	2.5	Historical garages	4	8	36	45	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
61	3.1	Active or recent landfill	0	0	0	0	-
61	3.2	Historical landfill (BGS records)	0	0	0	0	-
62	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
62	3.4	Historical landfill (EA/NRW records)	0	0	0	1	-
62	3.5	Historical waste sites	2	2	13	26	-
67	3.6	Licensed waste sites	0	0	3	0	-
68	3.7	Waste exemptions	0	0	18	39	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
74	4.1	Recent industrial land uses	0	9	28	-	-
77	4.2	Current or recent petrol stations	0	0	1	2	-
77	4.3	Electricity cables	0	0	0	0	-
77	4.4	Gas pipelines	0	0	0	0	-
77	4.5	Sites determined as Contaminated Land	0	0	0	0	-

78	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
78	4.7	Regulated explosive sites	0	0	0	0	-
78	4.8	Hazardous substance storage/usage	0	0	0	0	-
78	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
78	**4.10**	**Licensed industrial activities (Part A(1))**	0	0	0	2	-
79	**4.11**	**Licensed pollutant release (Part A(2)/B)**	0	1	1	3	-
80	4.12	Radioactive Substance Authorisations	0	0	0	0	-
80	**4.13**	**Licensed Discharges to controlled waters**	0	1	21	29	-
88	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
88	4.15	Pollutant release to public sewer	0	0	0	0	-
88	4.16	List 1 Dangerous Substances	0	0	0	0	-
88	4.17	List 2 Dangerous Substances	0	0	0	0	-
89	**4.18**	**Pollution Incidents (EA/NRW)**	0	0	1	6	-
90	4.19	Pollution inventory substances	0	0	0	0	-
90	4.20	Pollution inventory waste transfers	0	0	0	0	-
90	4.21	Pollution inventory radioactive waste	0	0	0	0	-

Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
91	**5.1**	**Superficial aquifer**	Identified (within 500m)				
93	**5.2**	**Bedrock aquifer**	Identified (within 500m)				
95	**5.3**	**Groundwater vulnerability**	Identified (within 50m)				
96	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
96	5.5	Groundwater vulnerability- local information	None (within 0m)				
97	**5.6**	**Groundwater abstractions**	0	0	0	1	46
109	**5.7**	**Surface water abstractions**	0	0	0	2	4
111	**5.8**	**Potable abstractions**	0	0	0	0	9
114	**5.9**	**Source Protection Zones**	0	0	0	1	-
114	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-

Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
115	**6.1**	**Water Network (OS MasterMap)**	4	9	23	-	-

118	6.2	Surface water features	1	4	7	-	-
119	6.3	WFD Surface water body catchments	1	-	-	-	-
119	6.4	WFD Surface water bodies	1	0	2	-	-
120	6.5	WFD Groundwater bodies	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
121	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	High (within 50m)				
122	7.2	Historical Flood Events	1	0	0	-	-
122	7.3	Flood Defences	0	0	0	-	-
122	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
123	7.5	Flood Storage Areas	0	0	0	-	-
124	7.6	Flood Zone 2	Identified (within 50m)				
125	7.7	Flood Zone 3	Identified (within 50m)				
Page	Section	Surface water flooding					
126	8.1	Surface water flooding	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding					
128	9.1	Groundwater flooding	High (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
129	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
129	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
129	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
129	10.4	Special Protection Areas (SPA)	0	0	0	0	0
130	10.5	National Nature Reserves (NNR)	0	0	0	0	0
130	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
130	10.7	Designated Ancient Woodland	0	0	0	0	0
130	10.8	Biosphere Reserves	0	0	0	0	0
131	10.9	Forest Parks	0	0	0	0	0
131	10.10	Marine Conservation Zones	0	0	0	0	0
131	10.11	Green Belt	0	0	0	0	0
131	10.12	Proposed Ramsar sites	0	0	0	0	0

131	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
132	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
132	10.15	Nitrate Sensitive Areas	0	0	0	0	0
132	**10.16**	**Nitrate Vulnerable Zones**	0	0	0	0	3
133	**10.17**	**SSSI Impact Risk Zones**	1	-	-	-	-
134	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
135	11.1	World Heritage Sites	0	0	0	-	-
136	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
136	11.3	National Parks	0	0	0	-	-
136	**11.4**	**Listed Buildings**	0	2	29	-	-
138	**11.5**	**Conservation Areas**	1	0	0	-	-
138	**11.6**	**Scheduled Ancient Monuments**	0	0	1	-	-
139	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
140	**12.1**	**Agricultural Land Classification**	Urban (within 250m)				
141	12.2	Open Access Land	0	0	0	-	-
141	12.3	Tree Felling Licences	0	0	0	-	-
141	12.4	Environmental Stewardship Schemes	0	0	0	-	-
141	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
142	13.1	Priority Habitat Inventory	0	0	0	-	-
142	13.2	Habitat Networks	0	0	0	-	-
143	**13.3**	**Open Mosaic Habitat**	0	0	1	-	-
143	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
144	**14.1**	**10k Availability**	Identified (within 500m)				
145	**14.2**	**Artificial and made ground (10k)**	1	0	2	5	-
147	**14.3**	**Superficial geology (10k)**	0	0	4	3	-

148	14.4	Landslip (10k)	0	0	0	0	-
149	**14.5**	**Bedrock geology (10k)**	1	0	0	1	-
150	**14.6**	**Bedrock faults and other linear features (10k)**	0	0	1	1	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
151	**15.1**	**50k Availability**	Identified (within 500m)				
152	**15.2**	**Artificial and made ground (50k)**	0	0	1	1	-
153	15.3	Artificial ground permeability (50k)	0	0	-	-	-
154	**15.4**	**Superficial geology (50k)**	0	0	4	3	-
155	15.5	Superficial permeability (50k)	None (within 50m)				
155	15.6	Landslip (50k)	0	0	0	0	-
155	15.7	Landslip permeability (50k)	None (within 50m)				
156	**15.8**	**Bedrock geology (50k)**	1	0	0	1	-
157	**15.9**	**Bedrock permeability (50k)**	Identified (within 50m)				
157	**15.10**	**Bedrock faults and other linear features (50k)**	0	0	1	1	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
158	**16.1**	**BGS Boreholes**	2	21	155	-	-
Page	Section	Natural ground subsidence					
166	**17.1**	**Shrink swell clays**	Negligible (within 50m)				
167	**17.2**	**Running sands**	Low (within 50m)				
168	**17.3**	**Compressible deposits**	Negligible (within 50m)				
169	**17.4**	**Collapsible deposits**	Very low (within 50m)				
170	**17.5**	**Landslides**	Very low (within 50m)				
171	**17.6**	**Ground dissolution of soluble rocks**	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
173	18.1	Natural cavities	0	0	0	0	-
174	18.2	BritPits	0	0	0	0	-
174	**18.3**	**Surface ground workings**	19	2	22	-	-
176	18.4	Underground workings	0	0	0	0	0
176	18.5	Historical Mineral Planning Areas	0	0	0	0	-

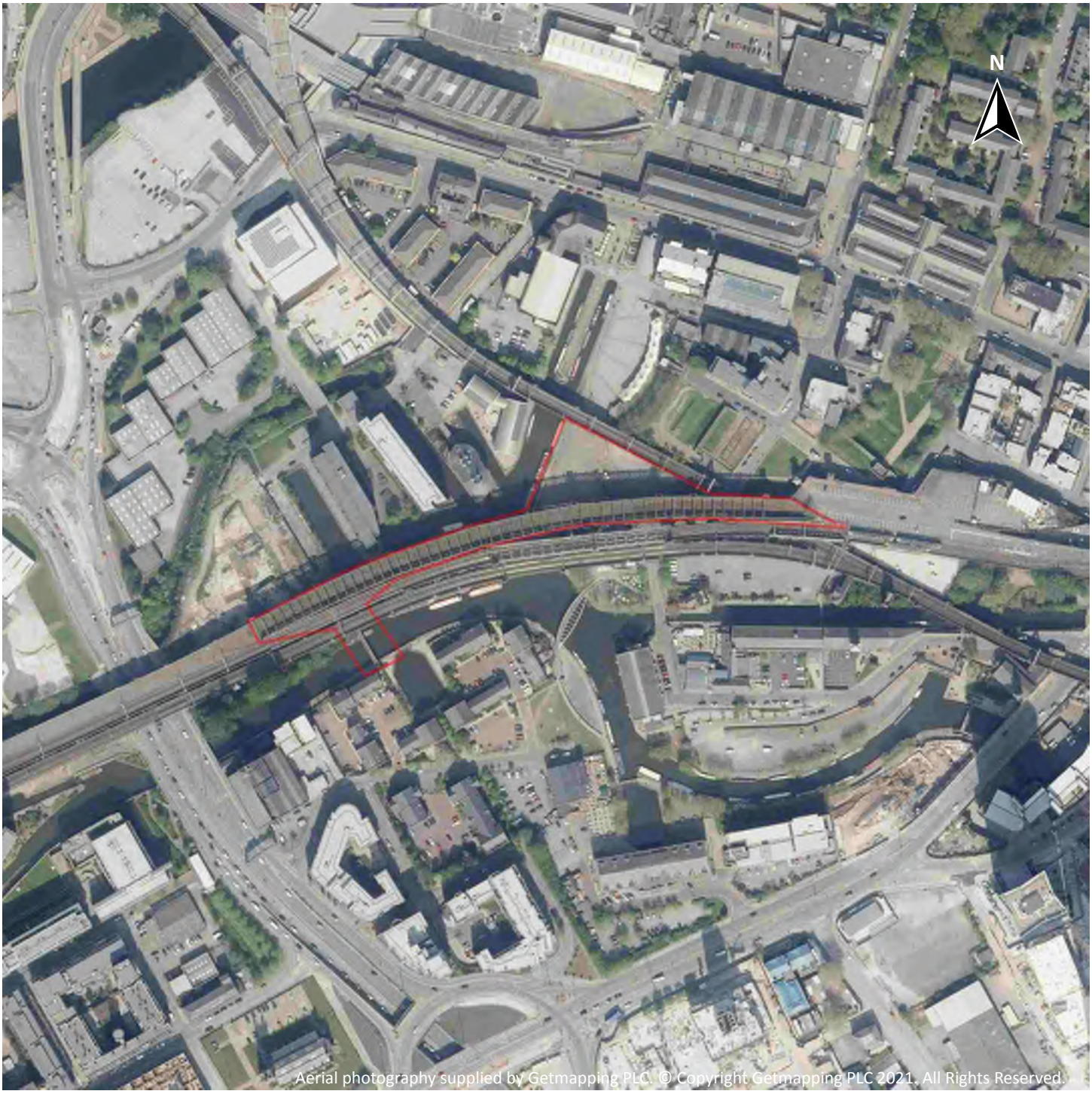
176	18.6	Non-coal mining	0	0	0	0	0
176	**18.7**	**Mining cavities**	0	0	0	0	1
177	**18.8**	**JPB mining areas**	Identified (within 0m)				
177	**18.9**	**Coal mining**	Identified (within 0m)				
178	18.10	Brine areas	None (within 0m)				
178	18.11	Gypsum areas	None (within 0m)				
178	18.12	Tin mining	None (within 0m)				
178	18.13	Clay mining	None (within 0m)				

Page	Section	Radon	
179	**19.1**	**Radon**	Less than 1% (within 0m)

Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
180	**20.1**	**BGS Estimated Background Soil Chemistry**	2	2	-	-	-
180	**20.2**	**BGS Estimated Urban Soil Chemistry**	6	8	-	-	-
181	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-

Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
182	21.1	Underground railways (London)	0	0	0	-	-
182	21.2	Underground railways (Non-London)	0	0	0	-	-
183	**21.3**	**Railway tunnels**	1	0	0	-	-
183	**21.4**	**Historical railway and tunnel features**	17	6	61	-	-
186	21.5	Royal Mail tunnels	0	0	0	-	-
186	**21.6**	**Historical railways**	3	0	8	-	-
187	**21.7**	**Railways**	10	12	25	-	-
189	21.8	Crossrail 1	0	0	0	0	-
189	21.9	Crossrail 2	0	0	0	0	-
189	21.10	HS2	0	0	0	0	-

Recent aerial photograph

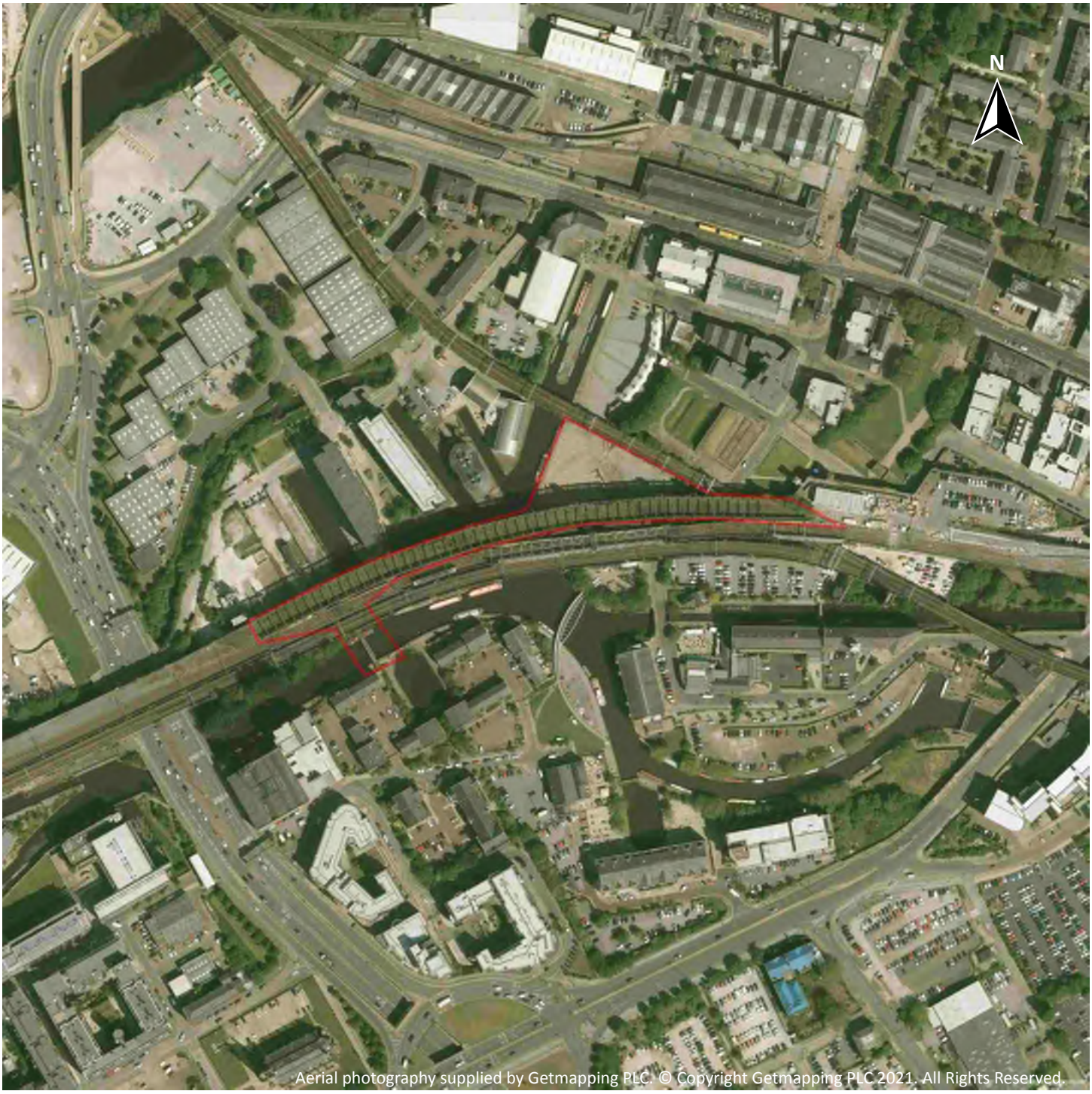


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Capture Date: 22/04/2019

Site Area: 0.99ha

Recent site history - 2015 aerial photograph



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Capture Date: 11/06/2015

Site Area: 0.99ha

Recent site history - 2009 aerial photograph

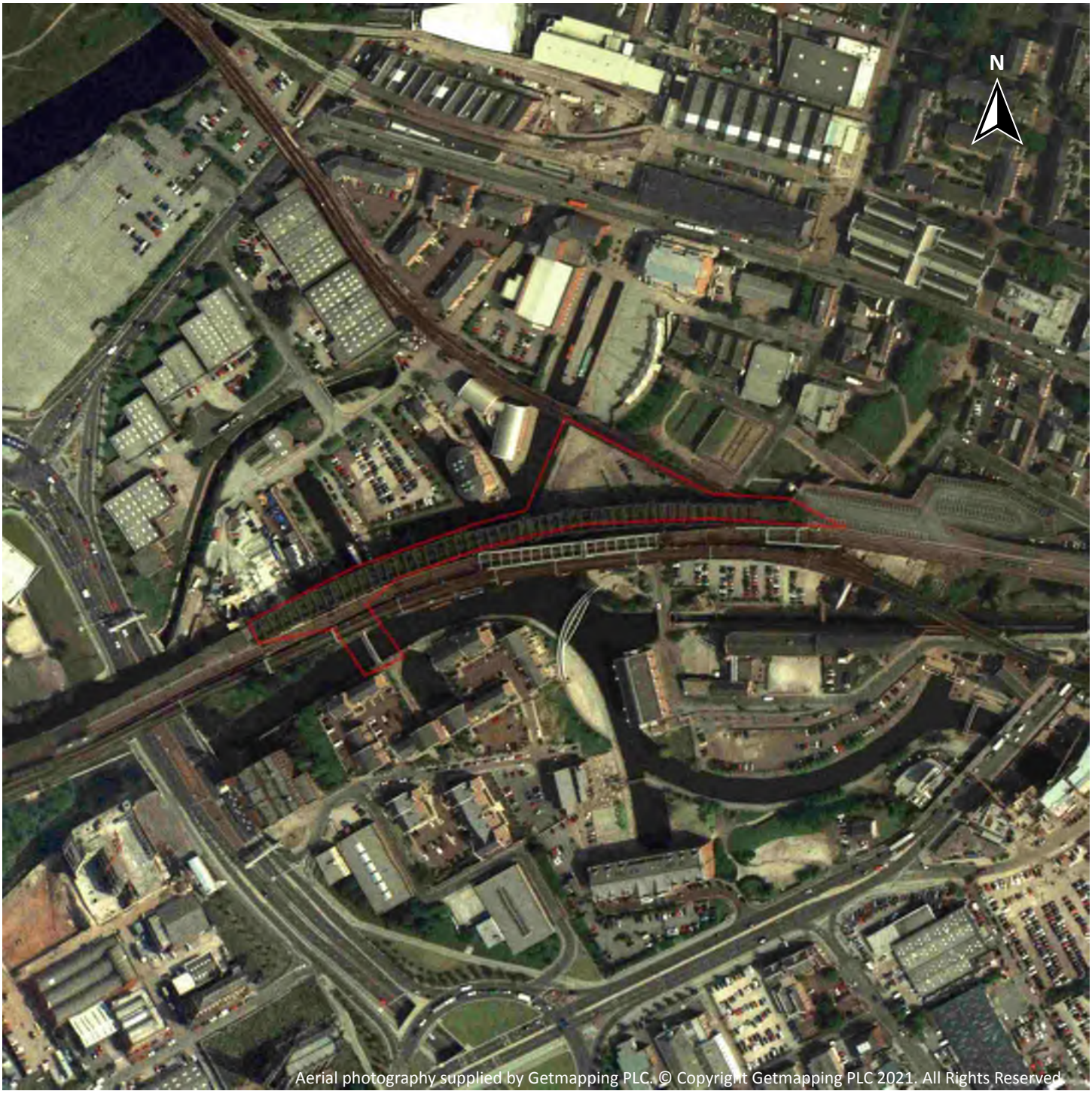


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Capture Date: 02/06/2009

Site Area: 0.99ha

Recent site history - 2000 aerial photograph

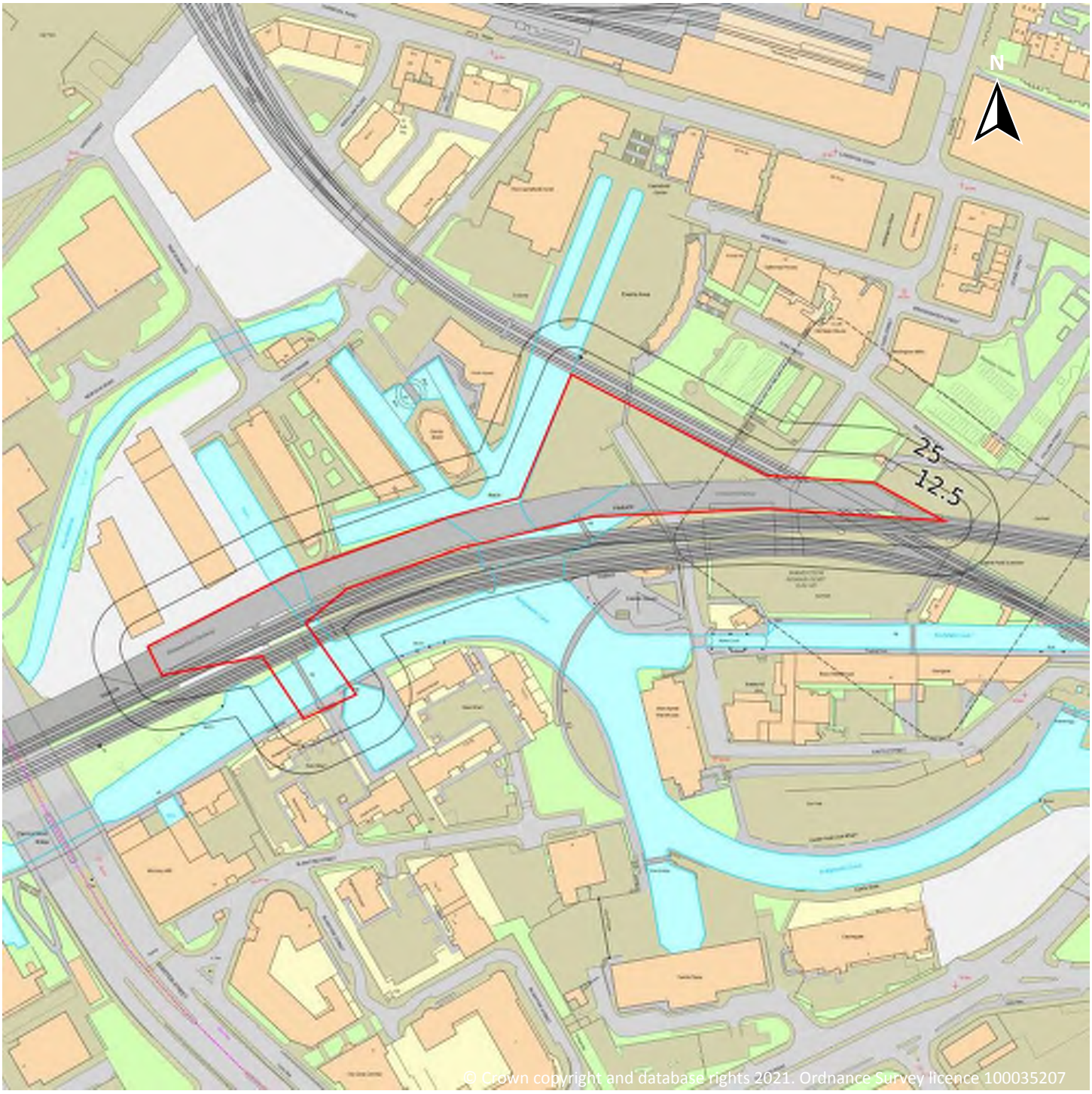


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Capture Date: 27/06/2000

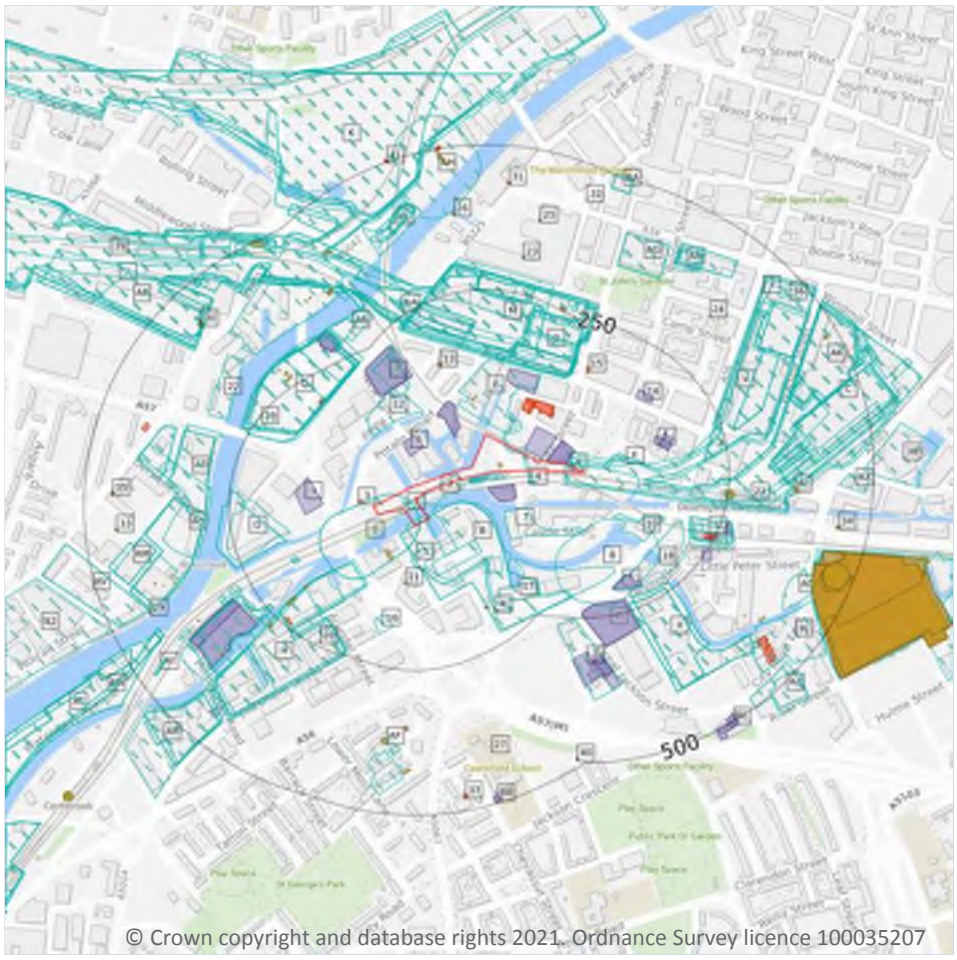
Site Area: 0.99ha

OS MasterMap site plan



Site Area: 0.99ha

1 Past land use



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Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

Historical garages

1.1 Historical industrial land uses

Records within 500m	256

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 13**

ID	Location	Land use	Dates present	Group ID
1	**On site**	**Wharf**	**1851**	**831113**

ID	Location	Land use	Dates present	Group ID
2	**On site**	**Timber Wharf**	**1851**	**811392**
A	**On site**	**Railway Building**	**1923**	**820260**
A	**On site**	**Unspecified Ground Workings**	**1851**	**800610**
A	**On site**	**Railway Building**	**1932 - 1938**	**982027**
B	**On site**	**Quay**	**1851**	**846276**
B	**On site**	**Unspecified Depot**	**1978**	**853404**
B	**On site**	**Unspecified Depot**	**1985 - 1994**	**921090**
C	**On site**	**Railway Sidings**	**1905 - 1916**	**871753**
C	**On site**	**Railway Sidings**	**1923**	**923309**
C	**On site**	**Railway Sidings**	**1932 - 1938**	**982150**
D	**On site**	**Unspecified Wharves**	**1905 - 1916**	**881666**
D	**On site**	**Unspecified Wharves**	**1932 - 1938**	**937403**
A	0m NE	Railway Building	1916	972538
C	3m NE	Railway Sidings	1956	917334
A	4m S	Railway Building	1932 - 1938	878526
A	5m S	Railway Building	1916 - 1923	906988
A	6m S	Railway Buildings	1905	833631
E	19m NE	Unspecified Depot	1985 - 1988	896077
4	19m S	Railway Building	1905 - 1923	846298
F	40m NE	Railway Buildings	1905 - 1938	962263
5	41m SE	Gravel Pit	1851	807881
7	64m S	Slate Wharf	1851	837258
B	69m SE	Warehouse	1851	837277
B	77m S	Unspecified Ground Workings	1851	800608
8	87m S	Quay	1905 - 1938	872988
10	89m SE	Unspecified Commercial/Industrial	1851	796720
H	89m SW	Unspecified Commercial/Industrial	1956 - 1971	923803
H	95m SW	Unspecified Commercial/Industrial	1905	894637

ID	Location	Land use	Dates present	Group ID
H	95m SW	Unspecified Mills	1916 - 1938	928073
12	108m NW	Paper Mill	1851	833296
B	122m SE	Unspecified Warehouses	1971	812727
I	129m N	Railway Sidings	1923	921834
G	133m N	Railway Buildings	1896	833656
I	133m N	Railway Sidings	1896	979167
H	135m SW	Unspecified Commercial/Industrial	1896	861626
G	135m N	Goods Sheds	1905 - 1938	958104
K	135m N	Railway Sidings	1916 - 1938	893253
K	135m N	Railway Sidings	1894	920471
L	135m N	Railway Sidings	1932	936526
L	135m N	Railway Sidings	1905	984895
M	140m N	Goods Depot	1978	893922
M	140m N	Goods Depot	1971	912312
G	142m N	Railway Building	1978	848652
G	142m N	Railway Building	1971	911620
G	142m N	Railway Building	1985	938373
G	142m N	Railway Sidings	1956	951082
I	142m N	Railway Sidings	1956	956450
M	147m N	Unspecified Commercial/Industrial	1851	796722
N	148m N	Railway Sidings	1971	888837
N	148m N	Railway Sidings	1985	891167
N	148m N	Railway Sidings	1978	944715
O	151m W	Quay	1851	808069
M	151m N	Railway Sidings	1988 - 1994	962023
M	152m N	Railway Building	1905 - 1916	858395
M	152m N	Railway Building	1932 - 1938	966518
P	153m N	Unspecified Commercial/Industrial	1923	796721

ID	Location	Land use	Dates present	Group ID
H	156m SW	Railway Building	1923	820273
H	158m SW	Railway Building	1932 - 1938	912895
M	159m N	Railway Buildings	1896	833655
M	162m N	Railway Sidings	1851	921813
O	162m W	Unspecified Warehouses	1905	812726
O	162m W	Unspecified Warehouse	1916 - 1938	867773
16	164m S	Sand Pit	1851	797576
17	171m SE	Warehouse	1851	837278
M	172m N	Goods Station	1905 - 1938	920947
18	175m SE	Unspecified Commercial/Industrial	1851	796718
Q	176m NW	Corporation Yard	1896	896211
M	178m N	Railway Building	1985 - 1994	858030
M	178m N	Railway Building	1956 - 1971	893290
M	178m N	Railway Building	1978	963323
H	178m SW	Unspecified Mills	1978	870292
Q	181m NW	Unspecified Depot	1978	848064
Q	181m NW	Unspecified Depot	1985	873557
Q	181m NW	Unspecified Depot	1988	876447
Q	181m NW	Unspecified Depot	1971	889604
Q	181m NW	Cleansing Depot	1956	901006
Q	182m NW	Corporation Yard	1923	899229
Q	182m NW	Corporation Yard	1905	974049
Q	182m NW	Corporation Yard	1916	987793
Q	184m NW	Cleansing Depot	1932 - 1938	902946
S	187m E	Railway Sidings	1896	975593
G	187m N	Goods Sheds	1905 - 1938	880509
P	188m NW	Refuse Heap	1851	829086
G	193m N	Goods Station	1956	821661

ID	Location	Land use	Dates present	Group ID
G	193m N	Railway Building	1978	907268
G	193m N	Railway Building	1985	923295
G	193m N	Railway Building	1971	983624
U	198m E	Railway Station	1978	855265
U	198m E	Railway Station	1956 - 1971	962338
Q	200m NW	Chemical Works	1851	834546
U	200m SE	Railway Station	1905 - 1938	975016
U	207m SE	Railway Station	1896	899988
V	208m E	Railway Sidings	1971	946450
V	208m E	Railway Sidings	1985	958621
V	208m E	Railway Sidings	1978	989903
H	209m SW	Unspecified Commercial/Industrial	1923	965943
U	209m SE	Railway Station	1985 - 1994	880682
Q	213m NW	Quay	1851	808070
X	228m S	Automobile Works	1956	813191
X	228m S	Unspecified Works	1978	940175
X	228m S	Unspecified Works	1971	948531
M	233m N	Goods Sheds	1905 - 1938	895888
19	234m NW	Brewery	1851	822705
C	236m E	Railway Building	1923	820272
M	236m N	Railway Building	1896	878088
Y	238m E	Railway Buildings	1923	833657
X	238m S	Unspecified Commercial/Industrial	1923	846058
X	238m S	Unspecified Mill	1932 - 1938	877197
X	238m S	Unspecified Commercial/Industrial	1905	896875
X	238m S	Unspecified Mill	1916	904261
M	239m N	Railway Building	1956 - 1971	913293
M	239m N	Railway Building	1985	916120

ID	Location	Land use	Dates present	Group ID
M	239m N	Railway Building	1978	967702
H	248m SW	Unspecified Commercial/Industrial	1896	974596
Z	251m S	Unspecified Depot	1971	818414
H	253m SW	Iron Works	1905	822792
H	253m SW	Unspecified Commercial/Industrial	1916 - 1923	850018
M	254m N	Railway Building	1923	820441
M	255m N	Railway Buildings	1923	925398
AA	256m NW	Railway Building	1923	969528
AA	258m NW	Railway Building	1956	820442
G	259m NE	Railway Buildings	1932 - 1938	921932
M	261m N	Railway Buildings	1905 - 1916	876717
M	261m N	Railway Buildings	1932 - 1938	894881
AA	263m NW	Railway Building	1932 - 1938	903707
AA	263m NW	Railway Building	1905 - 1916	865666
G	267m NE	Railway Building	1905 - 1923	869326
H	270m SW	Railway Buildings	1923	833632
H	270m SW	Railway Building	1932 - 1938	920704
AB	272m N	Dye Works	1851	833958
M	278m N	Railway Building	1916 - 1923	854882
AC	280m W	Silk and Cotton Mill	1851	810085
21	285m E	Railway Building	1905 - 1938	978111
AC	286m W	Unspecified Commercial/Industrial	1956 - 1971	941987
AA	289m NW	Railway Building	1923	820443
AD	290m W	Unspecified Commercial/Industrial	1916 - 1938	919087
AD	290m W	Unspecified Commercial/Industrial	1905	980628
22	293m NW	Cotton Mill	1851	797895
AB	293m NW	Refuse Heap	1851	829085
AE	295m W	Iron Works	1916 - 1923	873229

ID	Location	Land use	Dates present	Group ID
AE	295m W	Unspecified Commercial/Industrial	1932 - 1938	846750
AE	295m W	Unspecified Commercial/Industrial	1905	870019
AA	299m NW	Railway Building	1956	820440
H	301m SW	Railway Building	1932 - 1938	845151
S	306m E	Disused Station	1978	925495
H	312m SW	Sawmill	1851	808364
S	318m E	Railway Station	1905 - 1938	896284
S	324m E	Railway Station	1956	888631
S	325m E	Railway Station	1896	915817
C	331m E	Railway Building	1923	820271
I	333m NW	Corporation Yard	1916 - 1923	939407
I	337m NW	Railway Sidings	1851	861529
I	347m NW	Railway Building	1923	855519
AG	352m N	Unspecified Works	1932 - 1938	898924
AG	352m N	Unspecified Commercial/Industrial	1905	935109
AG	352m N	Unspecified Commercial/Industrial	1923	991353
AD	353m W	Unspecified Heap	1851	804001
I	355m NW	Railway Building	1905 - 1916	930060
I	355m NW	Railway Building	1932 - 1938	946353
AE	357m W	Unspecified Works	1978	830431
AH	358m NW	Unspecified Wharf	1916 - 1923	884372
AD	364m W	Unspecified Commercial/Industrial	1932 - 1938	861402
AD	364m W	Unspecified Commercial/Industrial	1905	881193
AD	364m W	Iron Works	1916 - 1923	949359
Y	364m NE	Goods Station	1905 - 1938	846931
Y	368m NE	Goods Station	1956	945355
Y	370m NE	Disused Goods Station	1978	814351
Y	370m NE	Goods Station	1971	945855

ID	Location	Land use	Dates present	Group ID
AF	371m S	Unspecified Tank	1971	825226
S	375m E	Disused Station	1985	891253
AK	376m E	Goods Station	1932 - 1938	883356
AK	376m E	Goods Station	1905 - 1916	938206
AK	376m E	Goods Station	1923	943574
AL	376m NW	Unspecified Ground Workings	1905 - 1916	978845
AL	378m NW	Unspecified Ground Workings	1923 - 1938	892127
AL	378m NW	Unspecified Ground Workings	1956	950880
I	378m NW	Railway Building	1932 - 1938	895977
I	378m NW	Railway Building	1905 - 1916	903757
AF	380m S	Dye Works	1851	833956
H	381m SW	Railway Building	1932 - 1938	911580
AL	381m NW	Unspecified Ground Workings	1988	877209
AK	382m E	Goods Station	1956	923306
AM	382m W	Unspecified Works	1978	845316
AM	382m W	Unspecified Works	1985 - 1988	941424
AN	385m NE	Hospital	1923	963711
I	386m NW	Railway Building	1896	844983
I	389m NW	Railway Building	1956	978275
AN	392m NE	Hospital	1932 - 1938	946842
AJ	392m SE	Brewery	1851	822706
AN	393m NE	Hospital	1916	943105
AN	397m NE	Hospital	1978	946410
AN	397m NE	Hospital	1956 - 1971	988332
AO	400m SE	Cotton Mill	1851	797881
AN	405m NE	Hospital	1985 - 1988	928879
AP	410m NW	Mineral Yard	1923	893171
AP	412m NW	Mineral Yard	1916	903719

ID	Location	Land use	Dates present	Group ID
AQ	415m NW	Railway Sidings	1923	969001
AP	416m NW	Mineral Yard	1932 - 1938	926505
AR	420m SW	Unspecified Commercial/Industrial	1956 - 1971	952195
AS	422m E	Unspecified Commercial/Industrial	1851 - 1896	849974
28	422m NW	Railway Sidings	1896	881141
AS	425m E	Unspecified Commercial/Industrial	1932 - 1938	872530
AS	425m E	Gas Works	1905 - 1923	927583
AT	425m SW	Docks	1956 - 1971	847093
AT	425m SW	Docks	1988	876412
AT	425m SW	Railway Sidings	1971	927627
AT	425m SW	Railway Sidings	1977	933048
AT	425m SW	Railway Sidings	1956 - 1959	945210
AQ	427m NW	Railway Sidings	1956	985870
AU	427m NW	Railway Sidings	1978	956875
AU	427m NW	Railway Sidings	1971	969970
AV	427m SW	Unspecified Works	1978	830430
AV	427m SW	Unspecified Commercial/Industrial	1956 - 1971	927269
AS	429m E	Unspecified Commercial/Industrial	1956	976686
N	429m NW	Railway Buildings	1923	833654
AS	431m E	Unspecified Works	1971	976313
AR	431m SW	Unspecified Commercial/Industrial	1938	897464
AR	431m SW	Unspecified Mills	1916 - 1923	960036
AR	431m SW	Unspecified Commercial/Industrial	1905	967266
AW	432m SW	Railway Sidings	1905 - 1938	908250
AW	432m SW	Docks	1905 - 1938	930741
L	439m NW	Unspecified Works	1978	853423
L	439m NW	Unspecified Works	1985 - 1994	919158
AX	440m E	Bus Station	1978	842916

ID	Location	Land use	Dates present	Group ID
AY	442m SW	Railway Building	1905	878479
AY	442m SW	Railway Building	1923	892827
AO	444m E	Unspecified Tank	1956	940796
AO	444m SE	Gasometer	1905 - 1923	885805
AO	444m SE	Unspecified Tank	1932 - 1938	946195
AO	447m SE	Unspecified Tank	1896	890603
AO	451m E	Unspecified Tank	1971	856760
AO	451m E	Unspecified Tank	1978 - 1985	858491
36	453m NE	Railway Buildings	1923	833653
AX	454m E	Railway Building	1905 - 1938	985774
AO	468m SE	Railway Sidings	1896	794671
N	469m NW	Railway Buildings	1896	833652
N	473m NW	Railway Station	1905 - 1938	989189
AZ	477m SE	Unspecified Works	1971	830421
BA	478m NE	Hospital	1971	860292
BA	478m NE	Hospital	1978	862722
BA	478m NE	Hospital	1985 - 1994	942775
38	482m E	Cotton Mills	1851	811452
39	483m NW	Railway Sidings	1988 - 1994	982507
N	484m NW	Railway Building	1923	820334
N	485m NW	Railway Building	1896	945096
AT	485m SW	Docks	1896	887061
AT	485m SW	Railway Sidings	1896	986088
N	485m NW	Railway Building	1971	820335
AZ	486m SE	Glass Works	1851	797987
N	487m NW	Railway Building	1971	987093
N	488m NW	Railway Station	1956	893823
N	490m NW	Railway Building	1956 - 1971	920020

ID	Location	Land use	Dates present	Group ID
N	492m NW	Railway Station	1896	879526
AS	498m SE	Unspecified Works	1978	921026
42	499m SW	Unspecified Commercial/Industrial	1956 - 1971	948457

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m	**82**

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 13**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Unspecified Tank**	**1922**	**115648**
E	62m N	Unspecified Tank	1963	131255
D	62m SW	Tanks	1963	148559
F	65m E	Unspecified Tank	1932	115649
E	66m N	Unspecified Tank	1963	133635
11	98m S	Unspecified Tank	1995 - 1998	132953
H	173m SW	Tanks	1949	140617
H	174m SW	Tanks	1948 - 1998	149178
R	195m SE	Unspecified Tank	1980	132153
R	195m SE	Unspecified Tank	1980	143849
R	195m SE	Unspecified Tank	1960	123914
R	195m SE	Unspecified Tank	1969	143958
R	196m SE	Unspecified Tank	1963	141829
H	203m SW	Unspecified Tank	1948 - 1949	123558
C	241m E	Unspecified Tank	1979	134110

ID	Location	Land use	Dates present	Group ID
C	241m E	Unspecified Tank	1979	148049
20	241m SW	Unspecified Tank	1891	115659
Q	261m NW	Unspecified Tank	1932	115639
Q	263m NW	Unspecified Tank	1949 - 1963	128766
H	263m SW	Unspecified Tank	1908	125058
H	265m SW	Unspecified Tank	1893 - 1922	147499
Q	272m NW	Unspecified Tank	1949 - 1963	136050
Q	284m NW	Unspecified Tank	1932	115634
H	303m SW	Unspecified Tank	1891	115660
23	311m N	Unspecified Tank	1891	115647
24	347m NE	Unspecified Tank	1891	115646
H	358m SW	Unspecified Tank	1948 - 1963	128267
H	359m SW	Unspecified Tank	1982 - 1998	122775
I	359m NW	Unspecified Tank	1908	131064
I	362m NW	Unspecified Tank	1980	135020
I	363m NW	Unspecified Tank	1893 - 1922	126917
I	363m NW	Unspecified Tank	1990	144767
I	363m NW	Unspecified Tank	1992 - 1997	125308
AI	363m E	Tanks	1948 - 1979	130142
AI	363m E	Tanks	1948	141151
I	366m NW	Unspecified Tank	1932	115640
AE	367m W	Unspecified Tank	1891	115652
AE	367m W	Unspecified Tank	1891	115650
AE	368m W	Unspecified Tank	1891	115651
I	368m NW	Unspecified Tank	1953	133553
AJ	369m SE	Unspecified Tank	1891	115779
I	370m NW	Unspecified Tank	1949	129333
I	370m NW	Unspecified Tank	1963	130189

ID	Location	Land use	Dates present	Group ID
AE	370m W	Unspecified Tank	1891	115653
I	370m NW	Unspecified Tank	1949	137879
I	370m NW	Unspecified Tank	1949	146026
AF	370m S	Unspecified Tank	1963	127413
25	380m N	Unspecified Tank	1957 - 1958	143482
26	382m N	Unspecified Tank	1948 - 1983	135352
AE	386m W	Unspecified Tank	1891	115655
AF	393m S	Unspecified Tank	1891	115662
AJ	393m SE	Tanks	1948	107130
AJ	396m SE	Tanks	1948	106777
AE	399m W	Unspecified Tank	1891	115654
AO	404m SE	Unspecified Tank	1891	115954
27	409m S	Unspecified Tank	1891	115663
I	410m NW	Unspecified Tank	1949	115641
AF	420m S	Unspecified Tank	1949	135351
AF	423m S	Unspecified Tank	1948 - 1954	126405
29	426m SW	Unspecified Tank	1891	115656
AS	428m E	Gas Works	1893 - 1908	148771
AS	428m E	Gas Works	1891	138194
AS	429m E	Gas Works	1922	148353
30	430m NW	Tanks	1980	106793
32	441m NE	Unspecified Tank	1891	115644
33	443m W	Tanks	1977 - 1985	126256
AO	444m SE	Gasometer	1908 - 1922	137166
AO	444m SE	Unspecified Tank	1932	149223
AO	445m E	Unspecified Tank	1953 - 1969	138911
34	445m E	Tanks	1891	106783
AO	446m E	Unspecified Tank	1948 - 1979	134540

ID	Location	Land use	Dates present	Group ID
AO	447m E	Unspecified Tank	1980 - 1985	129756
AX	451m E	Unspecified Tank	1891	115955
AH	469m N	Tanks	1932	106800
AK	475m NE	Unspecified Tank	1986 - 1999	144065
AK	476m NE	Unspecified Tank	1988	124833
AR	479m SW	Unspecified Tank	1891	115661
AS	484m SE	Gas Works	1948	138071
N	486m NW	Unspecified Tank	1893	115630
AO	491m E	Unspecified Tank	1908 - 1932	134188
AO	492m E	Unspecified Tank	1953 - 1985	135604
AO	492m E	Unspecified Tank	1979	126042

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m	**37**

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 13**

ID	Location	Land use	Dates present	Group ID
3	19m W	Electricity Substation	1980 - 1997	78864
G	66m NE	Electricity Substation	1986	67819
G	66m NE	Electricity Substation	1990	69796
G	68m NE	Electricity Substation	1981	80246
G	68m NE	Electricity Substation	1994 - 1995	83961
G	76m NE	Electricity Substation	1948	82720
G	77m N	Electricity Substation	1979	77417

ID	Location	Land use	Dates present	Group ID
G	77m N	Electricity Substation	1995	82695
G	78m N	Electricity Substation	1948 - 1979	80738
13	140m NW	Electricity Substation	1994 - 1997	81653
15	160m N	Electricity Substation	1948 - 1995	75611
R	180m SE	Electricity Substation	1995 - 1997	72564
Q	198m NW	Electricity Substation	1990	78385
Q	198m NW	Electricity Substation	1992 - 1997	73642
H	236m SW	Electricity Substation	1948 - 1949	73349
G	251m NE	Electricity Substation	1986 - 1995	67220
G	252m NE	Electricity Substation	1994 - 1995	65816
AF	347m S	Electricity Substation	1977 - 1998	77866
AD	412m W	Electricity Substation	1948 - 1995	77805
AJ	415m SE	Electricity Substation	1998	73868
AJ	417m SE	Electricity Transformers	1969 - 1985	83603
AS	428m E	Gas Works	1893 - 1908	79545
AS	428m E	Gas Works	1891	72601
AS	429m E	Gas Works	1922	81689
AJ	432m SE	Electricity Substation	1948 - 1979	78830
AJ	432m SE	Electricity Substation	1969 - 1990	82938
31	433m N	Electricity Substation	1994 - 1996	77564
AO	444m SE	Gasometer	1908 - 1922	65948
35	448m W	Electricity Substation	1982 - 1995	65673
37	472m S	Electricity Substation	1969 - 1997	71174
AS	484m SE	Gas Works	1948	66529
40	484m SE	Electricity Substation	1997	65434
AH	498m N	Electricity Substation	1949 - 1955	83698
41	498m N	Electricity Substation	1983 - 1994	74311
AH	498m N	Electricity Substation	1953	83440

ID	Location	Land use	Dates present	Group ID
AH	498m N	Electricity Substation	1948	85173
AH	499m N	Electricity Substation	1969 - 1970	82059

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	**0**

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

1.5 Historical garages

Records within 500m	**45**

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 13**

ID	Location	Land use	Dates present	Group ID
A	**On site**	**Garage**	**1963**	**21869**
A	**On site**	**Garage**	**1963**	**21949**
A	**On site**	**Garage**	**1981 - 1986**	**26958**
A	6m N	Garage	1981	20293
A	23m S	Garage	1986	21682
A	23m S	Garage	1963 - 1981	25923
E	45m NW	Boat Repair Yard	1948 - 1949	26540
E	45m NW	Boat Repair Yard	1949 - 1953	27284
6	51m N	Garage	1990	20295

ID	Location	Land use	Dates present	Group ID
9	87m W	Garage	1978 - 1980	27283
G	97m NE	Garage	1981 - 1990	24611
J	130m NE	Garage	1995	20992
J	139m E	Garage	1994 - 1995	24725
J	139m E	Garage	1981 - 1990	24287
14	158m NE	Garage	1981	20294
P	162m NW	Garage	1992 - 1997	27064
P	165m NW	Garage	1990	24593
T	189m S	Garage	1969	22918
T	189m S	Garage	1980	25490
W	226m S	Garage	1980 - 1990	25615
W	226m S	Garage	1995 - 1997	27082
U	243m SE	Garage	1960 - 1969	25290
U	261m E	Garage	1986 - 1990	26912
U	262m E	Garage	1963 - 1981	26858
Q	266m NW	Garage	1949 - 1963	24553
Q	270m NW	Garage	1953	22545
Q	272m NW	Garage	1949	25081
H	281m SW	Omnibus Garage	1977	21743
H	281m SW	Bus Garage	1982 - 1984	27058
H	286m SW	Omnibus Garage	1949 - 1963	25395
H	286m SW	Omnibus Garage	1948 - 1963	24746
Z	309m S	Garage	1979	23209
Z	314m S	Garage	1980 - 1990	24581
Z	316m S	Garage	1980	21660
Z	316m S	Garage	1995 - 1997	24964
Z	317m S	Garage	1963	21028
Z	317m S	Garage	1960 - 1969	25973

ID	Location	Land use	Dates present	Group ID
Z	324m S	Garage	1959	23792
AR	435m SW	Garage	1948	20266
AO	440m SE	Garage	1953 - 1979	24802
BB	486m S	Garage	1959	22973
BB	486m S	Garage	1960 - 1979	27867
BC	488m SE	Garage	1960 - 1963	24336
BC	488m SE	Garage	1979	22408
BC	498m SE	Garage	1959	21005

This data is sourced from Ordnance Survey / Groundsure.

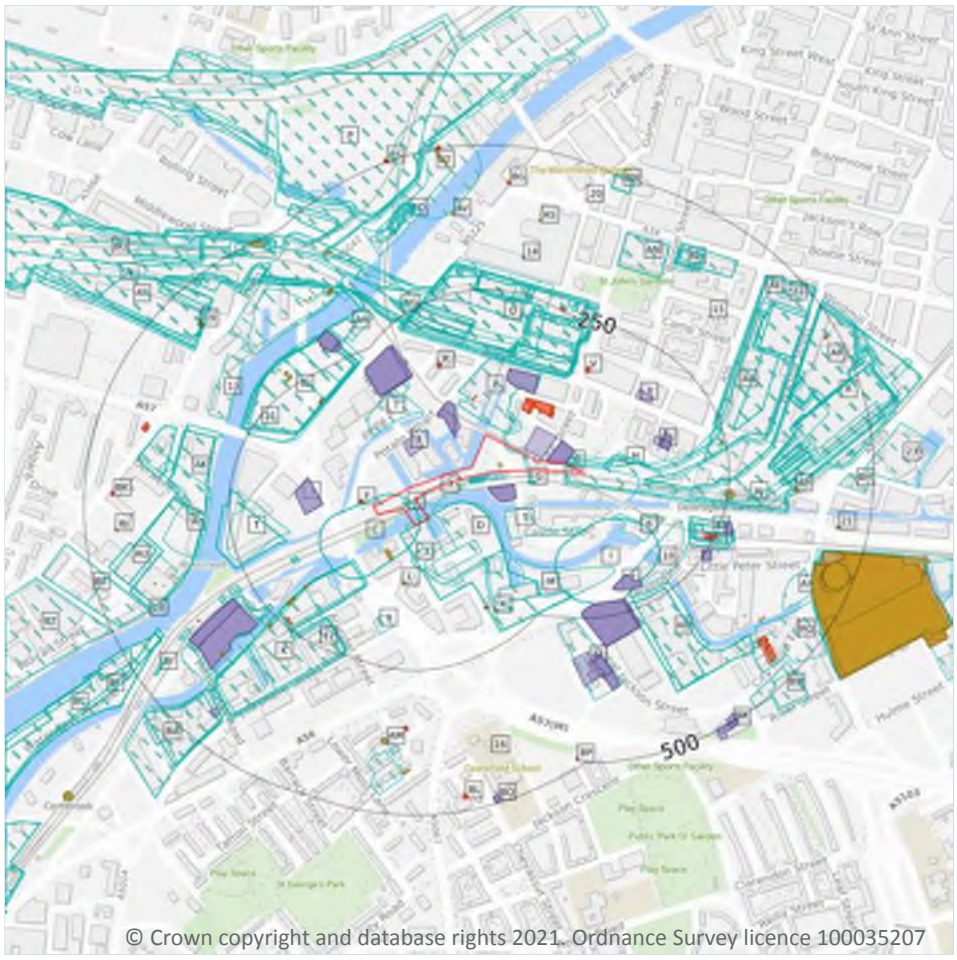
1.6 Historical military land

Records within 500m	**0**

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.

2 Past land use - un-grouped



Site Outline

Search buffers in metres (m)

Historical industrial land uses

Historical tanks

Historical energy features

Historical garages

2.1 Historical industrial land uses

Records within 500m	399

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 31**

ID	Location	Land Use	Date	Group ID
1	**On site**	**Timber Wharf**	**1851**	**811392**
2	**On site**	**Wharf**	**1851**	**831113**
A	**On site**	**Railway Sidings**	**1938**	**982150**

ID	Location	Land Use	Date	Group ID
A	**On site**	**Railway Sidings**	**1932**	**982150**
A	**On site**	**Railway Sidings**	**1916**	**871753**
A	**On site**	**Railway Sidings**	**1905**	**871753**
A	**On site**	**Railway Sidings**	**1923**	**923309**
B	**On site**	**Railway Building**	**1938**	**982027**
B	**On site**	**Railway Building**	**1932**	**982027**
B	**On site**	**Unspecified Ground Workings**	**1851**	**800610**
B	**On site**	**Railway Building**	**1923**	**820260**
C	**On site**	**Unspecified Wharves**	**1938**	**937403**
C	**On site**	**Unspecified Wharves**	**1932**	**937403**
C	**On site**	**Unspecified Wharves**	**1916**	**881666**
C	**On site**	**Unspecified Wharves**	**1905**	**881666**
D	**On site**	**Quay**	**1851**	**846276**
D	**On site**	**Unspecified Depot**	**1988**	**921090**
D	**On site**	**Unspecified Depot**	**1978**	**853404**
D	**On site**	**Unspecified Depot**	**1985**	**921090**
D	**On site**	**Unspecified Depot**	**1994**	**921090**
B	0m NE	Railway Building	1916	972538
A	3m NE	Railway Sidings	1956	917334
B	4m S	Railway Building	1938	878526
B	4m S	Railway Building	1932	878526
B	5m S	Railway Building	1916	906988
B	6m S	Railway Buildings	1905	833631
B	8m S	Railway Building	1923	906988
E	19m NE	Unspecified Depot	1988	896077
E	19m NE	Unspecified Depot	1985	896077
G	19m S	Railway Building	1916	846298
G	19m S	Railway Building	1905	846298

ID	Location	Land Use	Date	Group ID
G	19m S	Railway Building	1923	846298
H	40m NE	Railway Buildings	1938	962263
H	40m NE	Railway Buildings	1932	962263
H	40m NE	Railway Buildings	1916	962263
H	40m NE	Railway Buildings	1905	962263
H	40m NE	Railway Buildings	1923	962263
3	41m SE	Gravel Pit	1851	807881
5	64m S	Slate Wharf	1851	837258
D	69m SE	Warehouse	1851	837277
D	77m S	Unspecified Ground Workings	1851	800608
I	87m S	Quay	1938	872988
I	87m S	Quay	1932	872988
I	87m S	Quay	1916	872988
I	87m S	Quay	1905	872988
I	87m S	Quay	1923	872988
6	89m SE	Unspecified Commercial/Industrial	1851	796720
K	89m SW	Unspecified Commercial/Industrial	1971	923803
K	89m SW	Unspecified Commercial/Industrial	1956	923803
K	95m SW	Unspecified Mills	1938	928073
K	95m SW	Unspecified Mills	1932	928073
K	95m SW	Unspecified Mills	1916	928073
K	95m SW	Unspecified Commercial/Industrial	1905	894637
K	95m SW	Unspecified Mills	1923	928073
7	108m NW	Paper Mill	1851	833296
M	121m SE	Quay	1851	846276
D	122m SE	Unspecified Warehouses	1971	812727
N	129m N	Railway Sidings	1923	921834
E	133m N	Railway Buildings	1896	833656

ID	Location	Land Use	Date	Group ID
N	133m N	Railway Sidings	1896	979167
K	135m SW	Unspecified Commercial/Industrial	1896	861626
E	135m N	Goods Sheds	1938	958104
E	135m N	Goods Sheds	1932	958104
E	135m N	Goods Sheds	1916	958104
E	135m N	Goods Sheds	1905	958104
E	135m N	Goods Sheds	1923	958104
P	135m N	Railway Sidings	1938	893253
P	135m N	Railway Sidings	1932	936526
P	135m N	Railway Sidings	1916	893253
P	135m N	Railway Sidings	1905	984895
Q	140m N	Goods Depot	1971	912312
Q	140m N	Goods Depot	1978	893922
E	142m N	Railway Building	1971	911620
E	142m N	Railway Building	1978	848652
E	142m N	Railway Building	1985	938373
E	142m N	Railway Sidings	1956	951082
N	142m N	Railway Sidings	1956	956450
Q	147m N	Unspecified Commercial/Industrial	1851	796722
S	148m N	Railway Sidings	1971	888837
S	148m N	Railway Sidings	1978	944715
S	148m N	Railway Sidings	1985	891167
T	151m W	Quay	1851	808069
Q	151m N	Railway Sidings	1988	962023
Q	151m N	Railway Sidings	1994	962023
Q	152m N	Railway Building	1938	966518
Q	152m N	Railway Building	1932	966518
Q	152m N	Railway Building	1916	858395

ID	Location	Land Use	Date	Group ID
Q	152m N	Railway Building	1905	858395
U	153m N	Unspecified Commercial/Industrial	1923	796721
K	156m SW	Railway Building	1923	820273
K	158m SW	Railway Building	1938	912895
K	158m SW	Railway Building	1932	912895
Q	159m N	Railway Buildings	1896	833655
Q	162m N	Railway Sidings	1851	921813
T	162m W	Unspecified Warehouses	1905	812726
T	162m W	Unspecified Warehouse	1938	867773
T	162m W	Unspecified Warehouse	1932	867773
T	162m W	Unspecified Warehouse	1916	867773
T	162m W	Unspecified Warehouse	1923	867773
9	164m S	Sand Pit	1851	797576
M	171m SE	Warehouse	1851	837278
Q	172m N	Goods Station	1938	920947
Q	172m N	Goods Station	1932	920947
Q	172m N	Goods Station	1916	920947
Q	172m N	Goods Station	1905	920947
Q	172m N	Goods Station	1923	920947
10	175m SE	Unspecified Commercial/Industrial	1851	796718
W	176m NW	Corporation Yard	1896	896211
Q	178m N	Railway Building	1971	893290
Q	178m N	Railway Building	1956	893290
Q	178m N	Railway Building	1988	858030
Q	178m N	Railway Building	1978	963323
Q	178m N	Railway Building	1985	858030
Q	178m N	Railway Building	1994	858030
K	178m SW	Unspecified Mills	1978	870292

ID	Location	Land Use	Date	Group ID
W	181m NW	Unspecified Depot	1971	889604
W	181m NW	Cleansing Depot	1956	901006
W	181m NW	Unspecified Depot	1988	876447
W	181m NW	Unspecified Depot	1978	848064
W	181m NW	Unspecified Depot	1985	873557
W	182m NW	Corporation Yard	1905	974049
W	182m NW	Corporation Yard	1923	899229
W	182m NW	Corporation Yard	1916	987793
W	184m NW	Cleansing Depot	1938	902946
W	184m NW	Cleansing Depot	1932	902946
Y	187m E	Railway Sidings	1896	975593
E	187m N	Goods Sheds	1938	880509
E	187m N	Goods Sheds	1932	880509
E	187m N	Goods Sheds	1916	880509
E	187m N	Goods Sheds	1905	880509
E	187m N	Goods Sheds	1923	880509
U	188m NW	Refuse Heap	1851	829086
E	193m N	Railway Building	1971	983624
E	193m N	Goods Station	1956	821661
E	193m N	Railway Building	1978	907268
E	193m N	Railway Building	1985	923295
AA	198m E	Railway Station	1971	962338
AA	198m E	Railway Station	1956	962338
AA	198m E	Railway Station	1978	855265
W	200m NW	Chemical Works	1851	834546
AA	200m SE	Railway Station	1938	975016
AA	200m SE	Railway Station	1932	975016
AA	200m SE	Railway Station	1916	975016

ID	Location	Land Use	Date	Group ID
AA	200m SE	Railway Station	1905	975016
AA	200m SE	Railway Station	1923	975016
AA	207m SE	Railway Station	1896	899988
AB	208m E	Railway Sidings	1971	946450
AB	208m E	Railway Sidings	1978	989903
AB	208m E	Railway Sidings	1985	958621
K	209m SW	Unspecified Commercial/Industrial	1923	965943
AA	209m SE	Railway Station	1988	880682
AA	209m SE	Railway Station	1985	880682
AA	209m SE	Railway Station	1994	880682
W	213m NW	Quay	1851	808070
AD	228m S	Unspecified Works	1971	948531
AD	228m S	Automobile Works	1956	813191
AD	228m S	Unspecified Works	1978	940175
Q	233m N	Goods Sheds	1938	895888
Q	233m N	Goods Sheds	1932	895888
Q	233m N	Goods Sheds	1916	895888
Q	233m N	Goods Sheds	1905	895888
Q	233m N	Goods Sheds	1923	895888
11	234m NW	Brewery	1851	822705
A	236m E	Railway Building	1923	820272
Q	236m N	Railway Building	1896	878088
AE	238m E	Railway Buildings	1923	833657
AD	238m S	Unspecified Mill	1938	877197
AD	238m S	Unspecified Mill	1932	877197
AD	238m S	Unspecified Mill	1916	904261
AD	238m S	Unspecified Commercial/Industrial	1905	896875
AD	238m S	Unspecified Commercial/Industrial	1923	846058

ID	Location	Land Use	Date	Group ID
Q	239m N	Railway Building	1956	913293
Q	239m N	Railway Building	1971	913293
Q	239m N	Railway Building	1978	967702
Q	239m N	Railway Building	1985	916120
K	248m SW	Unspecified Commercial/Industrial	1896	974596
AF	251m S	Unspecified Depot	1971	818414
K	253m SW	Unspecified Commercial/Industrial	1916	850018
K	253m SW	Iron Works	1905	822792
K	253m SW	Unspecified Commercial/Industrial	1923	850018
Q	254m N	Railway Building	1923	820441
Q	255m N	Railway Buildings	1923	925398
AG	256m NW	Railway Building	1923	969528
AG	258m NW	Railway Building	1956	820442
E	259m NE	Railway Buildings	1938	921932
E	259m NE	Railway Buildings	1932	921932
Q	261m N	Railway Buildings	1938	894881
Q	261m N	Railway Buildings	1932	894881
Q	261m N	Railway Buildings	1916	876717
Q	261m N	Railway Buildings	1905	876717
AG	263m NW	Railway Building	1938	903707
AG	263m NW	Railway Building	1932	903707
AG	263m NW	Railway Building	1916	865666
AG	263m NW	Railway Building	1905	865666
E	267m NE	Railway Building	1916	869326
E	267m NE	Railway Building	1905	869326
E	267m NE	Railway Building	1923	869326
K	270m SW	Railway Buildings	1923	833632
K	270m SW	Railway Building	1938	920704

ID	Location	Land Use	Date	Group ID
K	270m SW	Railway Building	1932	920704
AH	272m N	Dye Works	1851	833958
Q	278m N	Railway Building	1923	854882
AI	280m W	Silk and Cotton Mill	1851	810085
AJ	285m E	Railway Building	1938	978111
AJ	285m E	Railway Building	1932	978111
AJ	285m E	Railway Building	1916	978111
AJ	285m E	Railway Building	1905	978111
AJ	285m E	Railway Building	1923	978111
Q	285m N	Railway Building	1916	854882
AI	286m W	Unspecified Commercial/Industrial	1971	941987
AI	286m W	Unspecified Commercial/Industrial	1956	941987
AG	289m NW	Railway Building	1923	820443
AK	290m W	Unspecified Commercial/Industrial	1938	919087
AK	290m W	Unspecified Commercial/Industrial	1932	919087
AK	290m W	Unspecified Commercial/Industrial	1916	919087
AK	290m W	Unspecified Commercial/Industrial	1905	980628
AK	290m W	Unspecified Commercial/Industrial	1923	919087
13	293m NW	Cotton Mill	1851	797895
AH	293m NW	Refuse Heap	1851	829085
AL	295m W	Unspecified Commercial/Industrial	1938	846750
AL	295m W	Unspecified Commercial/Industrial	1932	846750
AL	295m W	Iron Works	1916	873229
AL	295m W	Unspecified Commercial/Industrial	1905	870019
AL	295m W	Iron Works	1923	873229
AG	299m NW	Railway Building	1956	820440
K	301m SW	Railway Building	1938	845151
K	301m SW	Railway Building	1932	845151

ID	Location	Land Use	Date	Group ID
Y	306m E	Disused Station	1978	925495
K	312m SW	Sawmill	1851	808364
Y	318m E	Railway Station	1938	896284
Y	318m E	Railway Station	1932	896284
Y	318m E	Railway Station	1916	896284
Y	318m E	Railway Station	1905	896284
Y	318m E	Railway Station	1923	896284
Y	324m E	Railway Station	1956	888631
Y	325m E	Railway Station	1896	915817
A	331m E	Railway Building	1923	820271
N	333m NW	Corporation Yard	1923	939407
N	337m NW	Railway Sidings	1851	861529
N	339m NW	Corporation Yard	1916	939407
N	347m NW	Railway Building	1923	855519
AN	352m N	Unspecified Works	1938	898924
AN	352m N	Unspecified Works	1932	898924
AN	352m N	Unspecified Commercial/Industrial	1905	935109
AN	352m N	Unspecified Commercial/Industrial	1923	991353
AK	353m W	Unspecified Heap	1851	804001
N	355m NW	Railway Building	1938	946353
N	355m NW	Railway Building	1932	946353
N	355m NW	Railway Building	1916	930060
N	355m NW	Railway Building	1905	930060
AL	357m W	Unspecified Works	1978	830431
AO	358m NW	Unspecified Wharf	1923	884372
AK	364m W	Unspecified Commercial/Industrial	1938	861402
AK	364m W	Unspecified Commercial/Industrial	1932	861402
AK	364m W	Iron Works	1916	949359

ID	Location	Land Use	Date	Group ID
AK	364m W	Unspecified Commercial/Industrial	1905	881193
AK	364m W	Iron Works	1923	949359
AE	364m NE	Goods Station	1938	846931
AE	364m NE	Goods Station	1932	846931
AE	364m NE	Goods Station	1916	846931
AE	364m NE	Goods Station	1905	846931
AE	364m NE	Goods Station	1923	846931
AE	368m NE	Goods Station	1956	945355
AE	370m NE	Goods Station	1971	945855
AE	370m NE	Disused Goods Station	1978	814351
AM	371m S	Unspecified Tank	1971	825226
Y	375m E	Disused Station	1985	891253
AR	376m E	Goods Station	1938	883356
AR	376m E	Goods Station	1932	883356
AR	376m E	Goods Station	1916	938206
AR	376m E	Goods Station	1905	938206
AR	376m E	Goods Station	1923	943574
AO	376m NW	Unspecified Ground Workings	1905	978845
AO	378m NW	Unspecified Ground Workings	1923	892127
AO	378m NW	Unspecified Ground Workings	1956	950880
N	378m NW	Railway Building	1938	895977
N	378m NW	Railway Building	1932	895977
N	378m NW	Railway Building	1916	903757
N	378m NW	Railway Building	1905	903757
AM	380m S	Dye Works	1851	833956
K	381m SW	Railway Building	1938	911580
K	381m SW	Railway Building	1932	911580
AO	381m NW	Unspecified Ground Workings	1988	877209

ID	Location	Land Use	Date	Group ID
AT	382m N	Unspecified Wharf	1916	884372
AR	382m E	Goods Station	1956	923306
AU	382m W	Unspecified Works	1988	941424
AU	382m W	Unspecified Works	1978	845316
AU	382m W	Unspecified Works	1985	941424
AO	384m NW	Unspecified Ground Workings	1938	892127
AO	384m NW	Unspecified Ground Workings	1932	892127
AO	385m NW	Unspecified Ground Workings	1916	978845
AW	385m NE	Hospital	1923	963711
N	386m NW	Railway Building	1896	844983
N	389m NW	Railway Building	1956	978275
AW	392m NE	Hospital	1938	946842
AW	392m NE	Hospital	1932	946842
AQ	392m SE	Brewery	1851	822706
AW	393m NE	Hospital	1916	943105
AW	397m NE	Hospital	1971	988332
AW	397m NE	Hospital	1956	988332
AW	397m NE	Hospital	1978	946410
AX	400m SE	Cotton Mill	1851	797881
AW	405m NE	Hospital	1988	928879
AW	405m NE	Hospital	1985	928879
AY	410m NW	Mineral Yard	1923	893171
AY	412m NW	Mineral Yard	1916	903719
AZ	415m NW	Railway Sidings	1923	969001
AY	416m NW	Mineral Yard	1938	926505
AY	416m NW	Mineral Yard	1932	926505
BA	420m SW	Unspecified Commercial/Industrial	1971	952195
BA	420m SW	Unspecified Commercial/Industrial	1956	952195

ID	Location	Land Use	Date	Group ID
BB	422m E	Unspecified Commercial/Industrial	1896	849974
17	422m NW	Railway Sidings	1896	881141
BB	425m E	Unspecified Commercial/Industrial	1938	872530
BB	425m E	Unspecified Commercial/Industrial	1932	872530
BB	425m E	Gas Works	1916	927583
BB	425m E	Gas Works	1905	927583
BB	425m E	Gas Works	1923	927583
BC	425m SW	Railway Sidings	1971	927627
BC	425m SW	Docks	1971	847093
BC	425m SW	Railway Sidings	1956	945210
BC	425m SW	Docks	1956	847093
BC	425m SW	Docks	1988	876412
BD	427m NW	Railway Sidings	1971	969970
BD	427m NW	Railway Sidings	1978	956875
AZ	427m NW	Railway Sidings	1956	985870
BE	427m SW	Unspecified Commercial/Industrial	1971	927269
BE	427m SW	Unspecified Commercial/Industrial	1956	927269
BE	427m SW	Unspecified Works	1978	830430
BB	429m E	Unspecified Commercial/Industrial	1956	976686
S	429m NW	Railway Buildings	1923	833654
BB	431m E	Unspecified Works	1971	976313
BA	431m SW	Unspecified Commercial/Industrial	1938	897464
BA	431m SW	Unspecified Mills	1916	960036
BA	431m SW	Unspecified Commercial/Industrial	1905	967266
BA	431m SW	Unspecified Mills	1923	960036
BF	432m SW	Docks	1938	930741
BF	432m SW	Docks	1932	930741
BF	432m SW	Docks	1916	930741

ID	Location	Land Use	Date	Group ID
BF	432m SW	Docks	1905	930741
BF	432m SW	Railway Sidings	1938	908250
BF	432m SW	Railway Sidings	1932	908250
BF	432m SW	Railway Sidings	1916	908250
BF	432m SW	Railway Sidings	1905	908250
BF	432m SW	Railway Sidings	1923	908250
BF	432m SW	Docks	1923	930741
P	439m NW	Unspecified Works	1988	919158
P	439m NW	Unspecified Works	1978	853423
P	439m NW	Unspecified Works	1985	919158
P	439m NW	Unspecified Works	1994	919158
BH	440m E	Bus Station	1978	842916
BI	442m SW	Railway Building	1905	878479
BI	442m SW	Railway Building	1923	892827
AX	444m E	Unspecified Tank	1956	940796
AX	444m SE	Gasometer	1916	885805
AX	444m SE	Gasometer	1905	885805
AX	444m SE	Unspecified Tank	1938	946195
AX	444m SE	Unspecified Tank	1932	946195
AX	444m SE	Gasometer	1923	885805
AX	447m SE	Unspecified Tank	1896	890603
AX	451m E	Unspecified Tank	1971	856760
AX	451m E	Unspecified Tank	1978	858491
AX	451m E	Unspecified Tank	1985	858491
22	453m NE	Railway Buildings	1923	833653
BH	454m E	Railway Building	1938	985774
BH	454m E	Railway Building	1932	985774
BH	454m E	Railway Building	1916	985774

ID	Location	Land Use	Date	Group ID
BH	454m E	Railway Building	1905	985774
BH	454m E	Railway Building	1923	985774
AX	468m SE	Railway Sidings	1896	794671
S	469m NW	Railway Buildings	1896	833652
S	473m NW	Railway Station	1938	989189
S	473m NW	Railway Station	1932	989189
S	473m NW	Railway Station	1916	989189
S	473m NW	Railway Station	1905	989189
S	473m NW	Railway Station	1923	989189
BM	477m SE	Unspecified Works	1971	830421
BN	478m NE	Hospital	1971	860292
BN	478m NE	Hospital	1988	942775
BN	478m NE	Hospital	1978	862722
BN	478m NE	Hospital	1985	942775
BN	478m NE	Hospital	1994	942775
23	482m E	Cotton Mills	1851	811452
BO	483m NW	Railway Sidings	1988	982507
BO	483m NW	Railway Sidings	1994	982507
S	484m NW	Railway Building	1923	820334
S	485m NW	Railway Building	1896	945096
BC	485m SW	Railway Sidings	1896	986088
BC	485m SW	Docks	1896	887061
S	485m NW	Railway Building	1971	820335
BM	486m SE	Glass Works	1851	797987
S	487m NW	Railway Building	1971	987093
S	488m NW	Railway Station	1956	893823
S	490m NW	Railway Building	1971	920020
S	490m NW	Railway Building	1956	920020

ID	Location	Land Use	Date	Group ID
S	492m NW	Railway Station	1896	879526
BB	498m SE	Unspecified Works	1978	921026
BT	499m SW	Unspecified Commercial/Industrial	1971	948457
BT	499m SW	Unspecified Commercial/Industrial	1956	948457

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m	**158**

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 31**

ID	Location	Land Use	Date	Group ID
B	**On site**	**Unspecified Tank**	**1922**	**115648**
E	62m N	Unspecified Tank	1963	131255
C	62m SW	Tanks	1963	148559
C	62m SW	Tanks	1963	148559
E	63m N	Unspecified Tank	1963	131255
H	65m E	Unspecified Tank	1932	115649
E	66m N	Unspecified Tank	1963	133635
E	67m N	Unspecified Tank	1963	133635
L	98m S	Unspecified Tank	1997	132953
L	98m S	Unspecified Tank	1995	132953
L	98m S	Unspecified Tank	1998	132953
L	98m S	Unspecified Tank	1995	132953
K	173m SW	Tanks	1949	140617
K	174m SW	Tanks	1954	149178
K	174m SW	Tanks	1977	149178
K	174m SW	Tanks	1963	149178

ID	Location	Land Use	Date	Group ID
K	174m SW	Tanks	1948	149178
K	174m SW	Tanks	1995	149178
K	174m SW	Tanks	1998	149178
K	174m SW	Tanks	1995	149178
K	174m SW	Tanks	1984	149178
K	174m SW	Tanks	1982	149178
K	174m SW	Tanks	1982	149178
X	195m SE	Unspecified Tank	1980	132153
X	195m SE	Unspecified Tank	1980	143849
X	195m SE	Unspecified Tank	1960	123914
X	195m SE	Unspecified Tank	1969	143958
X	196m SE	Unspecified Tank	1963	141829
K	203m SW	Unspecified Tank	1949	123558
K	203m SW	Unspecified Tank	1948	123558
A	241m E	Unspecified Tank	1979	134110
A	241m E	Unspecified Tank	1979	148049
12	241m SW	Unspecified Tank	1891	115659
W	261m NW	Unspecified Tank	1932	115639
W	263m NW	Unspecified Tank	1953	128766
K	263m SW	Unspecified Tank	1908	125058
W	264m NW	Unspecified Tank	1963	128766
W	264m NW	Unspecified Tank	1949	128766
W	264m NW	Unspecified Tank	1949	128766
W	264m NW	Unspecified Tank	1949	128766
K	265m SW	Unspecified Tank	1893	147499
K	265m SW	Unspecified Tank	1922	147499
W	272m NW	Unspecified Tank	1953	136050
W	272m NW	Unspecified Tank	1963	136050

ID	Location	Land Use	Date	Group ID
W	272m NW	Unspecified Tank	1949	136050
W	273m NW	Unspecified Tank	1949	136050
W	273m NW	Unspecified Tank	1949	136050
W	284m NW	Unspecified Tank	1932	115634
K	303m SW	Unspecified Tank	1891	115660
14	311m N	Unspecified Tank	1891	115647
15	347m NE	Unspecified Tank	1891	115646
K	358m SW	Unspecified Tank	1963	128267
K	358m SW	Unspecified Tank	1949	128267
K	358m SW	Unspecified Tank	1954	128267
K	358m SW	Unspecified Tank	1963	128267
K	358m SW	Unspecified Tank	1948	128267
K	359m SW	Unspecified Tank	1997	122775
K	359m SW	Unspecified Tank	1995	122775
K	359m SW	Unspecified Tank	1998	122775
K	359m SW	Unspecified Tank	1995	122775
N	359m NW	Unspecified Tank	1908	131064
K	359m SW	Unspecified Tank	1984	122775
K	359m SW	Unspecified Tank	1982	122775
K	359m SW	Unspecified Tank	1982	122775
N	362m NW	Unspecified Tank	1980	135020
N	363m NW	Unspecified Tank	1893	126917
N	363m NW	Unspecified Tank	1922	126917
N	363m NW	Unspecified Tank	1990	144767
N	363m NW	Unspecified Tank	1990	144767
N	363m NW	Unspecified Tank	1995	125308
N	363m NW	Unspecified Tank	1994	125308
N	363m NW	Unspecified Tank	1993	125308

ID	Location	Land Use	Date	Group ID
N	363m NW	Unspecified Tank	1997	125308
N	363m NW	Unspecified Tank	1995	125308
N	363m NW	Unspecified Tank	1992	125308
AP	363m E	Tanks	1951	130142
AP	363m E	Tanks	1948	130142
AP	363m E	Tanks	1948	141151
AP	363m E	Tanks	1979	130142
AP	363m E	Tanks	1963	130142
N	366m NW	Unspecified Tank	1932	115640
AL	367m W	Unspecified Tank	1891	115652
AL	367m W	Unspecified Tank	1891	115650
AL	368m W	Unspecified Tank	1891	115651
N	368m NW	Unspecified Tank	1953	133553
AQ	369m SE	Unspecified Tank	1891	115779
N	370m NW	Unspecified Tank	1963	130189
N	370m NW	Unspecified Tank	1949	129333
AL	370m W	Unspecified Tank	1891	115653
N	370m NW	Unspecified Tank	1949	146026
N	370m NW	Unspecified Tank	1949	137879
AM	370m S	Unspecified Tank	1963	127413
AM	371m S	Unspecified Tank	1963	127413
AS	380m N	Unspecified Tank	1958	143482
AS	380m N	Unspecified Tank	1957	143482
AV	382m N	Unspecified Tank	1955	135352
AV	382m N	Unspecified Tank	1949	135352
AV	382m N	Unspecified Tank	1955	135352
AV	383m N	Unspecified Tank	1953	135352
AV	383m N	Unspecified Tank	1948	135352

ID	Location	Land Use	Date	Group ID
AV	383m N	Unspecified Tank	1969	135352
AV	383m N	Unspecified Tank	1970	135352
AV	383m N	Unspecified Tank	1963	135352
AV	384m N	Unspecified Tank	1983	135352
AL	386m W	Unspecified Tank	1891	115655
AM	393m S	Unspecified Tank	1891	115662
AQ	393m SE	Tanks	1948	107130
AQ	396m SE	Tanks	1948	106777
AL	399m W	Unspecified Tank	1891	115654
AX	404m SE	Unspecified Tank	1891	115954
16	409m S	Unspecified Tank	1891	115663
N	410m NW	Unspecified Tank	1949	115641
AM	420m S	Unspecified Tank	1949	135351
AM	423m S	Unspecified Tank	1954	126405
AM	423m S	Unspecified Tank	1948	126405
18	426m SW	Unspecified Tank	1891	115656
BB	428m E	Gas Works	1893	148771
BB	428m E	Gas Works	1908	148771
BB	428m E	Gas Works	1891	138194
BB	429m E	Gas Works	1922	148353
19	430m NW	Tanks	1980	106793
20	441m NE	Unspecified Tank	1891	115644
BJ	443m W	Tanks	1979	126256
BJ	443m W	Tanks	1985	126256
BJ	444m W	Tanks	1982	126256
BJ	444m W	Tanks	1977	126256
AX	444m SE	Gasometer	1908	137166
AX	444m SE	Gasometer	1922	137166

ID	Location	Land Use	Date	Group ID
AX	444m SE	Unspecified Tank	1932	149223
AX	445m E	Unspecified Tank	1969	138911
AX	445m E	Unspecified Tank	1953	138911
21	445m E	Tanks	1891	106783
AX	446m E	Unspecified Tank	1979	134540
AX	446m E	Unspecified Tank	1963	134540
AX	446m E	Unspecified Tank	1948	134540
AX	447m E	Unspecified Tank	1980	129756
AX	447m E	Unspecified Tank	1980	129756
AX	447m E	Unspecified Tank	1985	129756
BH	451m E	Unspecified Tank	1891	115955
AT	469m N	Tanks	1932	106800
AR	475m NE	Unspecified Tank	1986	144065
AR	476m NE	Unspecified Tank	1988	124833
AR	477m NE	Unspecified Tank	1996	144065
AR	477m NE	Unspecified Tank	1995	144065
AR	477m NE	Unspecified Tank	1994	144065
AR	477m NE	Unspecified Tank	1999	144065
BA	479m SW	Unspecified Tank	1891	115661
BB	484m SE	Gas Works	1948	138071
S	486m NW	Unspecified Tank	1893	115630
AX	491m E	Unspecified Tank	1908	134188
AX	491m E	Unspecified Tank	1922	134188
AX	491m E	Unspecified Tank	1932	134188
AX	492m E	Unspecified Tank	1969	135604
AX	492m E	Unspecified Tank	1953	135604
AX	492m E	Unspecified Tank	1979	126042
AX	494m E	Unspecified Tank	1980	135604

ID	Location	Land Use	Date	Group ID
AX	494m E	Unspecified Tank	1980	135604
AX	494m E	Unspecified Tank	1985	135604

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m	**128**

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 31**

ID	Location	Land Use	Date	Group ID
F	19m W	Electricity Substation	1980	78864
F	20m NW	Electricity Substation	1995	78864
F	20m NW	Electricity Substation	1994	78864
F	20m NW	Electricity Substation	1993	78864
F	20m NW	Electricity Substation	1997	78864
F	20m NW	Electricity Substation	1995	78864
F	20m NW	Electricity Substation	1992	78864
F	20m W	Electricity Substation	1990	78864
F	20m W	Electricity Substation	1990	78864
E	66m NE	Electricity Substation	1986	67819
E	66m NE	Electricity Substation	1990	69796
E	68m NE	Electricity Substation	1981	80246
E	68m NE	Electricity Substation	1995	83961
E	68m NE	Electricity Substation	1994	83961
E	76m NE	Electricity Substation	1948	82720
E	77m N	Electricity Substation	1979	77417
E	77m N	Electricity Substation	1995	82695
E	78m N	Electricity Substation	1979	80738

ID	Location	Land Use	Date	Group ID
E	79m NE	Electricity Substation	1948	80738
R	140m NW	Electricity Substation	1997	81653
R	141m NW	Electricity Substation	1995	81653
R	142m NW	Electricity Substation	1995	81653
R	142m NW	Electricity Substation	1994	81653
V	160m N	Electricity Substation	1986	75611
V	160m N	Electricity Substation	1990	75611
V	161m N	Electricity Substation	1981	75611
V	161m N	Electricity Substation	1979	75611
V	161m N	Electricity Substation	1948	75611
V	161m N	Electricity Substation	1979	75611
V	161m N	Electricity Substation	1948	75611
V	162m N	Electricity Substation	1995	75611
V	162m N	Electricity Substation	1994	75611
V	162m N	Electricity Substation	1995	75611
X	180m SE	Electricity Substation	1995	72564
X	180m SE	Electricity Substation	1997	72564
X	180m SE	Electricity Substation	1995	72564
X	180m SE	Electricity Substation	1997	72564
W	198m NW	Electricity Substation	1990	78385
W	198m NW	Electricity Substation	1995	73642
W	198m NW	Electricity Substation	1994	73642
W	198m NW	Electricity Substation	1993	73642
W	198m NW	Electricity Substation	1997	73642
W	198m NW	Electricity Substation	1995	73642
W	198m NW	Electricity Substation	1992	73642
K	236m SW	Electricity Substation	1949	73349
K	236m SW	Electricity Substation	1948	73349

ID	Location	Land Use	Date	Group ID
E	251m NE	Electricity Substation	1986	67220
E	251m NE	Electricity Substation	1990	67220
E	251m NE	Electricity Substation	1995	67220
E	252m NE	Electricity Substation	1995	65816
E	252m NE	Electricity Substation	1994	65816
AM	347m S	Electricity Substation	1977	77866
AM	347m S	Electricity Substation	1984	77866
AM	347m S	Electricity Substation	1982	77866
AM	347m S	Electricity Substation	1982	77866
AM	347m S	Electricity Substation	1997	77866
AM	347m S	Electricity Substation	1995	77866
AM	347m S	Electricity Substation	1998	77866
AM	347m S	Electricity Substation	1995	77866
AK	412m W	Electricity Substation	1995	77805
AK	412m W	Electricity Substation	1995	77805
AK	412m W	Electricity Substation	1995	77805
AK	412m W	Electricity Substation	1948	77805
AK	412m W	Electricity Substation	1992	77805
AK	412m W	Electricity Substation	1982	77805
AK	412m W	Electricity Substation	1977	77805
AK	412m W	Electricity Substation	1952	77805
AK	413m W	Electricity Substation	1949	77805
AK	413m W	Electricity Substation	1979	77805
AK	413m W	Electricity Substation	1985	77805
AK	413m W	Electricity Substation	1990	77805
AK	413m W	Electricity Substation	1990	77805
AQ	415m SE	Electricity Substation	1998	73868
AQ	417m SE	Electricity Transformers	1969	83603

ID	Location	Land Use	Date	Group ID
AQ	417m SE	Electricity Transformers	1980	83603
AQ	417m SE	Electricity Transformers	1980	83603
AQ	417m SE	Electricity Transformers	1985	83603
BB	428m E	Gas Works	1893	79545
BB	428m E	Gas Works	1908	79545
BB	428m E	Gas Works	1891	72601
BB	429m E	Gas Works	1922	81689
AQ	432m SE	Electricity Substation	1953	78830
AQ	432m SE	Electricity Substation	1969	82938
AQ	433m SE	Electricity Substation	1979	78830
AQ	433m SE	Electricity Substation	1948	78830
BG	433m N	Electricity Substation	1994	77564
BG	433m N	Electricity Substation	1996	77564
AQ	433m SE	Electricity Substation	1980	82938
AQ	433m SE	Electricity Substation	1980	82938
AQ	433m SE	Electricity Substation	1985	82938
AQ	433m SE	Electricity Substation	1987	82938
AQ	433m SE	Electricity Substation	1987	82938
AQ	433m SE	Electricity Substation	1990	82938
AX	444m SE	Gasometer	1908	65948
AX	444m SE	Gasometer	1922	65948
BK	448m W	Electricity Substation	1985	65673
BK	448m W	Electricity Substation	1990	65673
BK	448m W	Electricity Substation	1990	65673
BK	448m W	Electricity Substation	1992	65673
BK	448m W	Electricity Substation	1982	65673
BK	448m W	Electricity Substation	1995	65673
BK	448m W	Electricity Substation	1995	65673

ID	Location	Land Use	Date	Group ID
BK	448m W	Electricity Substation	1995	65673
BL	472m S	Electricity Substation	1969	71174
BL	472m S	Electricity Substation	1980	71174
BL	472m S	Electricity Substation	1980	71174
BL	472m S	Electricity Substation	1990	71174
BL	473m S	Electricity Substation	1995	71174
BL	473m S	Electricity Substation	1997	71174
BL	473m S	Electricity Substation	1995	71174
BL	473m S	Electricity Substation	1997	71174
BB	484m SE	Gas Works	1948	66529
BP	484m SE	Electricity Substation	1997	65434
BP	484m SE	Electricity Substation	1997	65434
AT	498m N	Electricity Substation	1955	83698
AT	498m N	Electricity Substation	1949	83698
AT	498m N	Electricity Substation	1955	83698
AT	498m N	Electricity Substation	1953	83440
AT	498m N	Electricity Substation	1948	85173
BS	498m N	Electricity Substation	1983	74311
BS	498m N	Electricity Substation	1990	74311
AT	499m N	Electricity Substation	1969	82059
BS	499m N	Electricity Substation	1994	74311
BS	499m N	Electricity Substation	1993	74311
BS	499m N	Electricity Substation	1993	74311
BS	499m N	Electricity Substation	1993	74311
BS	499m N	Electricity Substation	1994	74311
AT	500m N	Electricity Substation	1970	82059

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m	0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.

2.5 Historical garages

Records within 500m	93

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 31**

ID	Location	Land Use	Date	Group ID
B	**On site**	**Garage**	**1986**	**26958**
B	**On site**	**Garage**	**1963**	**21949**
B	**On site**	**Garage**	**1963**	**21869**
B	**On site**	**Garage**	**1981**	**26958**
B	6m N	Garage	1981	20293
B	23m S	Garage	1986	21682
B	23m S	Garage	1963	25923
B	23m S	Garage	1981	25923
B	24m S	Garage	1963	25923
E	45m NW	Boat Repair Yard	1948	26540
E	45m NW	Boat Repair Yard	1949	26540
E	45m NW	Boat Repair Yard	1949	27284
E	50m NW	Boat Repair Yard	1949	26540
E	50m NW	Boat Repair Yard	1953	27284
4	51m N	Garage	1990	20295
J	87m W	Garage	1980	27283

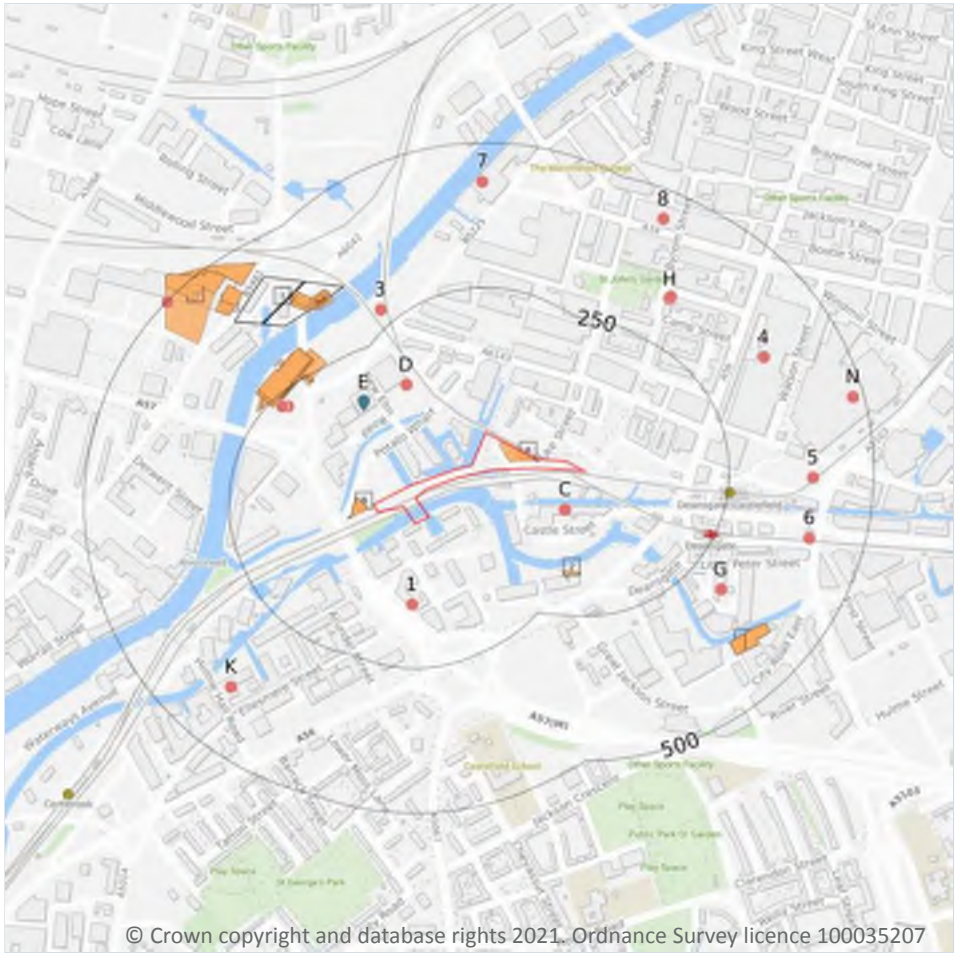
ID	Location	Land Use	Date	Group ID
J	89m W	Garage	1978	27283
E	97m NE	Garage	1986	24611
E	97m NE	Garage	1990	24611
E	97m NE	Garage	1981	24611
O	130m NE	Garage	1995	20992
O	139m E	Garage	1995	24725
O	139m E	Garage	1994	24725
O	139m E	Garage	1986	24287
O	139m E	Garage	1990	24287
O	141m E	Garage	1981	24287
8	158m NE	Garage	1981	20294
U	162m NW	Garage	1995	27064
U	162m NW	Garage	1992	27064
U	162m NW	Garage	1995	27064
U	162m NW	Garage	1994	27064
U	162m NW	Garage	1993	27064
U	162m NW	Garage	1997	27064
U	165m NW	Garage	1990	24593
U	165m NW	Garage	1990	24593
Z	189m S	Garage	1969	22918
Z	189m S	Garage	1980	25490
Z	189m S	Garage	1980	25490
AC	226m S	Garage	1980	25615
AC	226m S	Garage	1980	25615
AC	226m S	Garage	1990	25615
AC	226m S	Garage	1995	27082
AC	226m S	Garage	1997	27082
AC	226m S	Garage	1995	27082

ID	Location	Land Use	Date	Group ID
AC	226m S	Garage	1997	27082
AA	243m SE	Garage	1960	25290
AA	243m SE	Garage	1969	25290
AA	244m SE	Garage	1963	25290
AA	261m E	Garage	1986	26912
AA	261m E	Garage	1990	26912
AA	262m E	Garage	1963	26858
AA	262m E	Garage	1981	26858
AA	262m E	Garage	1979	26858
AA	262m E	Garage	1979	26858
AA	262m E	Garage	1963	26858
W	266m NW	Garage	1963	24553
W	266m NW	Garage	1949	24553
W	270m NW	Garage	1953	22545
W	272m NW	Garage	1949	25081
W	272m NW	Garage	1949	25081
K	281m SW	Bus Garage	1984	27058
K	281m SW	Bus Garage	1982	27058
K	281m SW	Bus Garage	1982	27058
K	281m SW	Omnibus Garage	1977	21743
K	286m SW	Omnibus Garage	1963	25395
K	286m SW	Omnibus Garage	1949	25395
K	286m SW	Omnibus Garage	1954	24746
K	286m SW	Omnibus Garage	1963	24746
K	286m SW	Omnibus Garage	1948	24746
AF	309m S	Garage	1979	23209
AF	314m S	Garage	1980	24581
AF	314m S	Garage	1990	24581

ID	Location	Land Use	Date	Group ID
AF	316m S	Garage	1980	21660
AF	316m S	Garage	1995	24964
AF	316m S	Garage	1997	24964
AF	316m S	Garage	1995	24964
AF	316m S	Garage	1997	24964
AF	317m S	Garage	1963	21028
AF	317m S	Garage	1960	25973
AF	317m S	Garage	1969	25973
AF	324m S	Garage	1959	23792
BA	435m SW	Garage	1948	20266
AX	440m SE	Garage	1979	24802
AX	440m SE	Garage	1963	24802
AX	441m SE	Garage	1953	24802
BQ	486m S	Garage	1960	27867
BQ	486m S	Garage	1959	22973
BQ	486m S	Garage	1979	27867
BQ	486m S	Garage	1963	27867
BR	488m SE	Garage	1963	24336
BR	488m SE	Garage	1979	22408
BR	498m SE	Garage	1960	24336
BR	498m SE	Garage	1959	21005

This data is sourced from Ordnance Survey / Groundsure.

3 Waste and landfill



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Site Outline

Search buffers in metres (m)

Historical landfill (EA/NRW)

Historical waste sites

Licensed waste sites

Waste exemptions

3.1 Active or recent landfill

Records within 500m	0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.2 Historical landfill (BGS records)

Records within 500m	0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.

3.3 Historical landfill (LA/mapping records)

Records within 500m	0

Landfill sites identified from Local Authority records and high detail historical mapping.

This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.

3.4 Historical landfill (EA/NRW records)

Records within 500m	1

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

Features are displayed on the Waste and landfill map on **page 61**

ID	Location	Details		
I	343m NW	Site Address: Wilburn Street, Salford, Greater Manchester Licence Holder Address: -	Waste Licence: - Site Reference: E052 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded - Last Recorded: -

This data is sourced from the Environment Agency and Natural Resources Wales.

3.5 Historical waste sites

Records within 500m	43

Waste site records derived from Local Authority planning records and high detail historical mapping.

Features are displayed on the Waste and landfill map on **page 61**

ID	Location	Address	Further Details	Date
A	**On site**	**Site Address: N/A**	**Type of Site: Scrap Yard** **Planning application reference: N/A** **Description: N/A** **Data source: Historic Mapping** **Data Type: Polygon**	**1979**

ID	Location	Address	Further Details	Date
A	**On site**	**Site Address: N/A**	**Type of Site: Scrap Yard** **Planning application reference: N/A** **Description: N/A** **Data source: Historic Mapping** **Data Type: Polygon**	**1986**
B	11m SW	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1995
B	11m SW	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1997
2	171m S	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1948
F	232m NW	Site Address: N/A	Type of Site: Refuse Destructors Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1932
F	235m NW	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1953
F	237m NW	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1952
F	237m NW	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1949
F	239m NW	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1979

ID	Location	Address	Further Details	Date
F	239m NW	Site Address: N/A	Type of Site: Refuse Destructors Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1978
F	241m NW	Site Address: N/A	Type of Site: Refuse Destructors Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1922
F	241m NW	Site Address: N/A	Type of Site: Refuse Destructors Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1922
F	241m NW	Site Address: N/A	Type of Site: Refuse Destructors Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1932
F	242m NW	Site Address: N/A	Type of Site: Refuse Destructors Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1908
F	243m NW	Site Address: N/A	Type of Site: Refuse Destructors Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1949
F	244m NW	Site Address: N/A	Type of Site: Refuse Destructors Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1908
I	340m NW	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1908
I	345m NW	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1932

ID	Location	Address	Further Details	Date
I	347m NW	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1908
I	348m NW	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1932
I	349m NW	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1922
I	352m NW	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1922
I	353m NW	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1953
I	353m NW	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1908
I	355m NW	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1952
I	355m NW	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1949
I	355m NW	Site Address: N/A	Type of Site: Refuse Destructor Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1949

ID	Location	Address	Further Details	Date
J	387m SE	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1995
J	387m SE	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1997
J	387m SE	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1995
J	387m SE	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1968
J	394m SE	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1987
J	394m SE	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1987
J	394m SE	Site Address: N/A	Type of Site: Scrap Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1990
L	410m NW	Site Address: N/A	Type of Site: Breakers Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1979
L	410m NW	Site Address: N/A	Type of Site: Breaker's Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1979

ID	Location	Address	Further Details	Date
M	410m NW	Site Address: N/A	Type of Site: Breaker's Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1979
L	417m NW	Site Address: N/A	Type of Site: Breaker's Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1979
L	417m NW	Site Address: N/A	Type of Site: Breakers Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1979
L	441m NW	Site Address: N/A	Type of Site: Breaker's Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1979
L	441m NW	Site Address: N/A	Type of Site: Breakers Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1979
M	455m NW	Site Address: N/A	Type of Site: Breakers Yard Planning application reference: N/A Description: N/A Data source: Historic Mapping Data Type: Polygon	1979

This data is sourced from Ordnance Survey/Groundsure and Local Authority records.

3.6 Licensed waste sites

Records within 500m	**3**

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

Features are displayed on the Waste and landfill map on **page 61**

ID	Location	Details		
E	164m NW	Site Name: R E M Mobile Plant Site Address: Medlock House, New Elm Road, Manchester, M3 4JW Correspondence Address: 25, Barnes Wallis Road, Segensworth East, Fareham, PO15 5TT	Type of Site: Mobile Plant Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RES001 EPR reference: - Operator: Resource And Environmental Consultants Ltd Waste Management licence No: 50480 Annual Tonnage: 75000	Issue Date: 12/12/2006 Effective Date: - Modified:: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
E	164m NW	Site Name: Rec Remediation Ltd - Mobile Plant Site Address: Medlock House, New Elm Road, Manchester, M3 4JW Correspondence Address: 25, Barnes Wallis Road, Segensworth East, Fareham, Hampshire, PO15 5TT	Type of Site: Mobile Plant Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: RES001 EPR reference: - Operator: Rec Remediation Ltd Waste Management licence No: 50480 Annual Tonnage: 75000	Issue Date: 12/12/2006 Effective Date: - Modified:: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued
E	164m NW	Site Name: Mobile Plant Site Address: Mobile Plant Permi Correspondence Address: -	Type of Site: Mobile Plant Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SOI005 EPR reference: EA/EPR/GP3895SV/T001 Operator: Soil & Water Remediation Ltd Waste Management licence No: 50480 Annual Tonnage: 0	Issue Date: 12/12/2006 Effective Date: 20/05/2010 Modified:: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred

This data is sourced from the Environment Agency and Natural Resources Wales.

3.7 Waste exemptions

Records within 500m	**57**

Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 61**

ID	Location	Site	Reference	Category	Sub-Category	Description
C	69m S	Bestway Panacea Holdings Limited, BULK REGISTRATION for Bestway Panacea Holdings Limited for 108 sites, M34LZ	NRW-WME005755	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
C	70m S	Bestway National Chemists LTD, BULK REGISTRATION for Bestway National Chemists Ltd (107 sites), M34LZ	NRW-WME036650	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
1	141m S	CITYGATE CENTRAL, UNIT 2, BLANTYRE STREET, MANCHESTER, M15 4SQ	WEX228851	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
D	160m NW	1 New Elm Road Manchester Manchester M3 4JH	EPR/EF0605VU/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in a secure place
D	160m NW	1 New Elm Road Manchester Manchester M3 4JH	EPR/EF0605VU/A001	Treating waste exemption	Non-Agricultural Waste Only	Sorting mixed waste
D	160m NW	1 New Elm Road Manchester Manchester M3 4JH	EPR/EF0605VU/A001	Treating waste exemption	Non-Agricultural Waste Only	Screening and blending of waste
D	160m NW	1 New Elm Road Manchester Manchester M3 4JH	EPR/EF0605VU/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in construction
F	225m NW	npa - Dawson Street Manchester Manchester M3 4JW	EPR/EF0604HZ/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in secure containers
F	225m NW	npa - Dawson Street Manchester Manchester M3 4JW	EPR/EF0604HZ/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in a secure place
F	225m NW	npa - Dawson Street Manchester Manchester M3 4JW	EPR/EF0604HZ/A001	Treating waste exemption	Non-Agricultural Waste Only	Screening and blending of waste

ID	Location	Site	Reference	Category	Sub-Category	Description
F	225m NW	npa - Dawson Street Manchester Manchester M3 4JW	EPR/EF0604HZ/A001	Treating waste exemption	Non-Agricultural Waste Only	Treatment of waste wood and waste plant matter by chipping, shredding, cutting or pulverising
F	225m NW	npa - Dawson Street Manchester Manchester M3 4JW	EPR/EF0604HZ/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in construction
F	225m NW	npa - Dawson Street Manchester Manchester M3 4JW	EPR/EF0604HZ/A001	Using waste exemption	Non-Agricultural Waste Only	Spreading of plant matter to confer benefit
F	230m NW	npa - Car Park Bounded by Trinity Way A6042 and River Irwell Water Street Manchester Manchester M3 4JH	EPR/NF0907TJ/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in secure containers
F	230m NW	npa - Car Park Bounded by Trinity Way A6042 and River Irwell Water Street Manchester Manchester M3 4JH	EPR/NF0907TJ/A001	Storing waste exemption	Non-Agricultural Waste Only	Storage of waste in a secure place
F	230m NW	npa - Car Park Bounded by Trinity Way A6042 and River Irwell Water Street Manchester Manchester M3 4JH	EPR/NF0907TJ/A001	Treating waste exemption	Non-Agricultural Waste Only	Screening and blending of waste
F	230m NW	npa - Car Park Bounded by Trinity Way A6042 and River Irwell Water Street Manchester Manchester M3 4JH	EPR/NF0907TJ/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in construction
F	230m NW	npa - Car Park Bounded by Trinity Way A6042 and River Irwell Water Street Manchester Manchester M3 4JH	EPR/NF0907TJ/A001	Using waste exemption	Non-Agricultural Waste Only	Use of mulch
3	279m NW	Compound 2 Water Street Manchester M3 4JH	EPR/FF0709KU/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in construction
G	312m SE	1, ALPHA PLACE, MANCHESTER, M15 4PP	WEX017965	Storing waste exemption	Not on a farm	Storage of waste in secure containers

ID	Location	Site	Reference	Category	Sub-Category	Description
G	312m SE	1, ALPHA PLACE, MANCHESTER, M15 4PP	WEX017965	Storing waste exemption	Not on a farm	Storage of waste in a secure place
H	331m NE	25 St. John Street MANCHESTER M3 4DT	EPR/DE5245SP/A001	Treating waste exemption	Non-Agricultural Waste Only	Sorting and de-naturing of controlled drugs for disposal
H	331m NE	25, ST. JOHN STREET, MANCHESTER, M3 4DT	WEX243303	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
H	331m NE	98, HARLEY STREET, LONDON, W1G 7HZ	WEX099367	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
H	335m NE	25 St John Street M34DT	EPR/FE5081QV/A001	Treating waste exemption	Non-Agricultural Waste Only	Sorting and de-naturing of controlled drugs for disposal
4	366m NE	THE MEWS, GREAT NORTHERN WAREHOUSE 235 DEANSGATE MANCHESTER M3 4EN	EPR/BF0603EU/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in the construction of entertainment or educational installations etc
5	394m E	Axis Tower, Albion Street, Manchester, M1 5NZ	WEX220537	Using waste exemption	Not on a farm	Use of waste in construction
K	395m SW	Former Excelsior Mill, Hulme Hall Road, Manchester, M15 4LA	WEX125363	Treating waste exemption	Not on a farm	Screening and blending of waste
K	395m SW	Former Excelsior Mill, Hulme Hall Road, Manchester, M15 4LA	WEX125363	Using waste exemption	Not on a farm	Use of waste in construction
6	405m E	Axis Tower, Albion Street, Manchester, M1 5NZ	WEX074989	Using waste exemption	Not on a farm	Use of waste in construction
7	433m N	WATER STREET, MANCHESTER, M3 4JQ	WEX146528	Using waste exemption	Not on a farm	Use of waste in construction
8	449m N	1 Spinningfields M3 3JE	EPR/QE5341ZN/A001	Using waste exemption	Non-Agricultural Waste Only	Use of waste in construction
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX217816	Storing waste exemption	Not on a farm	Storage of waste in a secure place
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX220776	Storing waste exemption	Not on a farm	Storage of waste in a secure place

ID	Location	Site	Reference	Category	Sub-Category	Description
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX220776	Storing waste exemption	Not on a farm	Storage of waste in secure containers
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX220776	Treating waste exemption	Not on a farm	Treatment of kitchen waste in a wormery
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX220776	Treating waste exemption	Not on a farm	Treatment of waste food
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX220776	Treating waste exemption	Not on a farm	Manual treatment of waste
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX220776	Treating waste exemption	Not on a farm	Sorting mixed waste
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX220776	Treating waste exemption	Not on a farm	Recovery of scrap metal
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX220776	Treating waste exemption	Not on a farm	Screening and blending of waste
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX220776	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX220776	Using waste exemption	Not on a farm	Use of waste in the construction of entertainment or educational installations etc
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX220776	Using waste exemption	Not on a farm	Use of waste in construction
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX075609	Storing waste exemption	Not on a farm	Storage of waste in secure containers
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX075609	Storing waste exemption	Not on a farm	Storage of waste in a secure place
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX075609	Treating waste exemption	Not on a farm	Sorting mixed waste
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX075609	Treating waste exemption	Not on a farm	Manual treatment of waste
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX075609	Treating waste exemption	Not on a farm	Treatment of waste food
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX075609	Treating waste exemption	Not on a farm	Treatment of kitchen waste in a wormery
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX075609	Treating waste exemption	Not on a farm	Preparatory treatments (baling, sorting, shredding etc)

ID	Location	Site	Reference	Category	Sub-Category	Description
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX075609	Treating waste exemption	Not on a farm	Screening and blending of waste
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX075609	Treating waste exemption	Not on a farm	Recovery of scrap metal
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX075609	Using waste exemption	Not on a farm	Use of waste in construction
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX075609	Using waste exemption	Not on a farm	Use of waste in the construction of entertainment or educational installations etc
N	480m E	WINDMILL STREET, MANCHESTER, M2 3GX	WEX063339	Storing waste exemption	Not on a farm	Storage of waste in a secure place
M	498m NW	REGENTS PARK, ORDSALL LANE, SALFORD, M5 3TP	WEX180162	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal

This data is sourced from the Environment Agency and Natural Resources Wales.

4 Current industrial land use



Site Outline

Search buffers in metres (m)

Recent industrial land uses

Current or recent petrol stations

Part A(1) industrial activities

Licensed pollutant release (Part A(2)/B)

Licensed Discharges to controlled waters

Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m	37

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 74**

ID	Location	Company	Address	Activity	Category
A	7m NW	Conveyors	Greater Manchester, M15	Conveyors	Industrial Features
A	16m NW	Hopper	Greater Manchester, M15	Hoppers and Silos	Farming
B	23m S	Slate Wharf	Greater Manchester, M15	Moorings and Unloading Facilities	Water
A	27m W	Scrap Yard	Greater Manchester, M15	Scrap Metal Merchants	Recycling Services

ID	Location	Company	Address	Activity	Category
B	28m S	Slate Wharf	Greater Manchester, M15	Moorings and Unloading Facilities	Water
A	28m NW	Works	Greater Manchester, M15	Unspecified Works Or Factories	Industrial Features
C	34m NE	Slate Wharf	Greater Manchester, M15	Moorings and Unloading Facilities	Water
A	38m NW	Depot	Greater Manchester, M3	Container and Storage	Transport, Storage and Delivery
C	49m E	Slate Wharf	Greater Manchester, M15	Moorings and Unloading Facilities	Water
2	70m S	Bass Warehouse	Greater Manchester, M3	Container and Storage	Transport, Storage and Delivery
3	79m NE	Electricity Sub Station	Greater Manchester, M3	Electrical Features	Infrastructure and Facilities
F	95m S	Tank	Greater Manchester, M15	Tanks (Generic)	Industrial Features
4	98m N	Electricity Sub Station	Greater Manchester, M3	Electrical Features	Infrastructure and Facilities
5	98m S	Merchants Warehouse	Greater Manchester, M3	Container and Storage	Transport, Storage and Delivery
6	132m S	Electricity Sub Station	Greater Manchester, M15	Electrical Features	Infrastructure and Facilities
7	133m NE	Service Graphics	Liverpool Road, Manchester, Greater Manchester, M3 4AQ	Published Goods	Industrial Products
8	145m NW	Electricity Sub Station	Greater Manchester, M3	Electrical Features	Infrastructure and Facilities
9	151m SW	Wharf	Greater Manchester, M15	Moorings and Unloading Facilities	Water
H	151m S	Castle Field Coal Wharf	Greater Manchester, M3	Moorings and Unloading Facilities	Water
10	162m N	Electricity Sub Station	Greater Manchester, M3	Electrical Features	Infrastructure and Facilities
H	172m S	Castle Field Coal Wharf	Greater Manchester, M15	Moorings and Unloading Facilities	Water
12	174m NE	Travelling Crane	Greater Manchester, M3	Travelling Cranes and Gantries	Industrial Features

ID	Location	Company	Address	Activity	Category
I	183m NE	N U Oil & Gas	Fifth Floor Castlefield House, Liverpool Road, Manchester, Greater Manchester, M3 4SB	Special Purpose Machinery and Equipment	Industrial Products
I	183m NE	R M R I Consulting Ltd	Castlefield House, Liverpool Road, Manchester, Greater Manchester, M3 4SB	Civil Engineers	Engineering Services
13	184m SE	Electricity Sub Station	Greater Manchester, M15	Electrical Features	Infrastructure and Facilities
J	194m SE	Bauer	Unit 1, Castle Quay, Manchester, Greater Manchester, M15 4NJ	Published Goods	Industrial Products
J	196m SE	Castle Quay	Greater Manchester, M15	Moorings and Unloading Facilities	Water
K	198m E	Deansgate-Castlefield (Mancheste r Metrolink)	Greater Manchester, M3	Tram, Metro and Light Railway Stations and Stops	Public Transport, Stations and Infrastructure
14	198m NW	Big Yellow Self Storage Company Ltd	1, New Elm Road, Manchester, Greater Manchester, M3 4JH	Container and Storage	Transport, Storage and Delivery
15	202m NW	Electricity Sub Station	Greater Manchester, M3	Electrical Features	Infrastructure and Facilities
K	202m E	printing.co m	Nettl, 323-325, Deansgate, Deansgate, Manchester, Greater Manchester, M3 4LQ	Published Goods	Industrial Products
K	202m E	Nettl	323-325, Deansgate, Manchester, Greater Manchester, M3 4LQ	Published Goods	Industrial Products
16	204m S	Depot	Greater Manchester, M15	Container and Storage	Transport, Storage and Delivery
17	208m W	Electricity Sub Station	Greater Manchester, M3	Electrical Features	Infrastructure and Facilities
18	229m SW	The Voiceover Gallery	110 Timber Wharf 32, Worsley Street, Manchester, Greater Manchester, M15 4NX	Recording Studios and Record Companies	IT, Advertising, Marketing and Media Services
19	237m NE	Electricity Sub Station	Greater Manchester, M3	Electrical Features	Infrastructure and Facilities
20	244m SE	Deansgate Rail Station	Greater Manchester, M15	Railway Stations, Junctions and Halts	Public Transport, Stations and Infrastructure

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	3

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on **page 74**

ID	Location	Company	Address	LPG	Status
F	96m S	OBSOLETE	Dawson Street, Manchester, Greater Manchester, M3 4JZ	Not Applicable	Obsolete
23	321m S	OBSOLETE	14, Great Jackson Street, Castlefield, Manchester, Greater Manchester, M15 4NG	Not Applicable	Obsolete
R	458m NW	SAINSBURYS	100, Regent Road, Ordsall Lane, Salford, Greater Manchester, M5 4QU	No	Open

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m	0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m	0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.5 Sites determined as Contaminated Land

Records within 500m	0

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m	0

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m	0

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m	0

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m	0

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.10 Licensed industrial activities (Part A(1))

Records within 500m	2

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

Features are displayed on the Current industrial land use map on **page 74**

ID	Location	Details	
T	490m E	Operator: MANCHESTER HEAT NETWORK TRADECO LIMITED Installation Name: MANCHESTER CIVIC QUARTER ENERGY CENTRE EPR/JP3700BU Process: NEW MEDIUM COMBUSTION PLANT Permit Number: JP3700BU Original Permit Number: JP3700BU	EPR Reference: - Issue Date: 20/08/2020 Effective Date: 20/08/2020 Last date noted as effective: 25/01/2021 Status: EFFECTIVE
T	490m E	Operator: MANCHESTER HEAT NETWORK TRADECO LIMITED Installation Name: MANCHESTER CIVIC QUARTER ENERGY CENTRE EPR/JP3700BU Process: TRANCHE A SG PERMITTING DATE 1ST OCTOBER 2019 Permit Number: JP3700BU Original Permit Number: JP3700BU	EPR Reference: - Issue Date: 20/08/2020 Effective Date: 20/08/2020 Last date noted as effective: 25/01/2021 Status: EFFECTIVE

This data is sourced from the Environment Agency and Natural Resources Wales.

4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m **5**

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

Features are displayed on the Current industrial land use map on **page 74**

ID	Location	Address	Details	
A	21m NW	Hanson Aggregates, Potato Wharf, Off Liverpool Road, M3 4LE	Process: Use of Bulk Cement Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
E	70m NW	Arc Northern, Potato Wharf, Liverpool Rd, M3 4NB	Process: Use of Bulk Cement Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
28	380m S	Tom Garner Motors, A Branch of Robins & Day Ltd, Chester Rd, Manchester, M15 4GA	Process: Respraying of Road Vehicles Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
R	438m NW	Sainsbury J Plc, 100 Regent Road, Salford, M5 4QU	Process: Unloading of Petrol into Storage at Service Stations Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

ID	Location	Address	Details	
R	444m NW	Sainsbury Plc, 100 Regent Road, Salford, M5 4QU	Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m	**0**

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.13 Licensed Discharges to controlled waters

Records within 500m	**51**

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on **page 74**

ID	Location	Address	Details	
1	33m NE	RICE ST NEAR CASTLE ST, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - WATER COMPANY Permit Number: 01MAN0171 Permit Version: 1 Receiving Water: BRIDGEWATER CANAL	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 15/09/1993 Revocation Date: 15/09/1993
D	52m NW	TOPHAM RES DEVELOPMENT SWO, LIVERPOOL ROAD/POTATO WHARF, CASTLEFIELD	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: 016991276 Permit Version: 1 Receiving Water: BRIDGEWATER CANAL	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 18/05/1988 Revocation Date: 01/07/1991
D	67m NW	READY MIXED CONCRETE DEPOT, LIVERPOOL ROAD	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: 016990275 Permit Version: 1 Receiving Water: BRIDGEWATER CANAL	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 10/03/1977 Revocation Date: 31/08/1989

ID	Location	Address	Details	
E	69m NW	POTATO WHARF, OFF LIVERPOOL RD, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 0175/5 Permit Version: 2 Receiving Water: CROWTON BROOK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/04/1991 Revocation Date: 31/12/1994
E	69m NW	POTATO WHARF, OFF LIVERPOOL RD, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 0175/5 Permit Version: 3 Receiving Water: CROWTON BROOK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/01/1995 Revocation Date: 30/06/1995
E	69m NW	POTATO WHARF, OFF LIVERPOOL RD, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 0175/5 Permit Version: 4 Receiving Water: CROWTON BROOK	Status: SURRENDERED UNDER EPR 2010 Issue date: - Effective Date: 01/07/1995 Revocation Date: 08/03/2016
A	75m SW	EGERTON ST WORSLEY ST CSO, EGERTON ST AND WORSLEY ST, CORNBROOK, A57 M, MANCHESTER, M15 4LG	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016983277 Permit Version: 1 Receiving Water: THE RIVER MEDLOCK	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 19/02/1999 Effective Date: 01/11/1999 Revocation Date: 31/03/2018
A	76m SW	CHESTER RD AT YORK ST, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982720 Permit Version: 1 Receiving Water: RIVER MEDLOCK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 30/09/1994 Revocation Date: 18/02/1999
A	76m SW	CHESTER RD/YORK ST, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0279 Permit Version: 1 Receiving Water: RIVER MEDLOCK	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01/01/1995 Revocation Date: 19/12/1999
A	76m SW	EGERTON ST/ELESMERE ST, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0180 Permit Version: 1 Receiving Water: RIVER MEDLOCK	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01/01/1995 Revocation Date: 12/08/1999

ID	Location	Address	Details	
A	76m SW	CHESTER RD AT YORK ST, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982720 Permit Version: 2 Receiving Water: RIVER MEDLOCK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 19/02/1999 Revocation Date: 14/07/2000
A	79m SW	EGERTON ST WORSLEY ST CSO, EGERTON ST AND WORSLEY ST, CORNBROOK, A57 M, MANCHESTER, M15 4LG	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016983277 Permit Version: 2 Receiving Water: THE RIVER MEDLOCK	Status: VARIED UNDER EPR 2010 Issue date: 12/03/2018 Effective Date: 01/04/2018 Revocation Date: -
A	85m SW	EGERTON ST/WORSLEY ST, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0181 Permit Version: 1 Receiving Water: RIVER MEDLOCK	Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: - Effective Date: 01/01/1995 Revocation Date: 01/01/1995
G	143m SE	POTATO WHARF, OFF LIVERPOOL RD, MANCHESTER	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: 0175/5 Permit Version: 1 Receiving Water: CROWTON BROOK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 20/01/1975 Revocation Date: 31/03/1991
G	143m SE	POTATO WHARF, OFF LIVERPOOL RD, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 0175/5 Permit Version: 1 Receiving Water: CROWTON BROOK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 20/01/1975 Revocation Date: 31/03/1991
G	143m SE	POTATO WHARF, OFF LIVERPOOL RD, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 0175/5 Permit Version: 2 Receiving Water: CROWTON BROOK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/04/1991 Revocation Date: 31/12/1994

ID	Location	Address	Details	
G	143m SE	POTATO WHARF, OFF LIVERPOOL RD, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 0175/5 Permit Version: 3 Receiving Water: CROWTON BROOK	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/01/1995 Revocation Date: 30/06/1995
G	143m SE	POTATO WHARF, OFF LIVERPOOL RD, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 0175/5 Permit Version: 4 Receiving Water: CROWTON BROOK	Status: SURRENDERED UNDER EPR 2010 Issue date: - Effective Date: 01/07/1995 Revocation Date: 08/03/2016
L	225m SE	DEANSGATE, L. PETER ST, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0157 Permit Version: 1 Receiving Water: TUNNEL TO MEDLOCK	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01/01/1995 Revocation Date: 02/09/2010
L	225m SE	DEANSGATE, L. PETER ST, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0157 Permit Version: 2 Receiving Water: TUNNEL TO MEDLOCK	Status: SURRENDERED UNDER EPR 2010 Issue date: 03/09/2010 Effective Date: 03/09/2010 Revocation Date: 18/07/2014
L	235m SE	CHESTER RD AT OWEN ST, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982719 Permit Version: 2 Receiving Water: RIVER MEDLOCK	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: - Effective Date: 01/12/1999 Revocation Date: -
L	235m SE	CHESTER RD AT OWEN ST, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0276 Permit Version: 1 Receiving Water: RIVER MEDLOCK	Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: - Effective Date: 01/01/1995 Revocation Date: 01/12/1999
21	252m S	MANCUNIAN WAY ROUNDABOUT, MANCHESTER	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0368 Permit Version: 1 Receiving Water: -	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01/01/1995 Revocation Date: -

ID	Location	Address	Details	
22	273m SW	ST GEORGES ISLAND PROJECTS OFFICE, HULME HALL ROAD	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: 016993598 Permit Version: 1 Receiving Water: RIVER MEDLOCK	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 14/09/2004 Effective Date: 14/09/2004 Revocation Date: 14/01/2005
M	306m NW	WATER STREET/LIVERPOOL ROAD CSO, WATER STREET, 133 LIVERPOOL ROAD, MANCHESTER, GREATER MANCHESTER, M3 4PU	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016993597 Permit Version: 2 Receiving Water: RIVER IRWELL	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 24/03/2014 Effective Date: 31/08/2014 Revocation Date: 08/01/2020
M	308m NW	WATER STREET/LIVERPOOL ROAD CSO, WATER STREET, 133 LIVERPOOL ROAD, MANCHESTER, GREATER MANCHESTER, M3 4PU	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0169 Permit Version: 1 Receiving Water: RIVER IRWELL	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/01/1995 Revocation Date: 25/10/1995
M	308m NW	WATER STREET/LIVERPOOL ROAD CSO, WATER STREET, 133 LIVERPOOL ROAD, MANCHESTER, GREATER MANCHESTER, M3 4PU	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016993597 Permit Version: 1 Receiving Water: RIVER IRWELL	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 05/10/2004 Effective Date: 05/10/2004 Revocation Date: 30/08/2014
M	309m NW	WATER STREET/LIVERPOOL ROAD CSO, WATER STREET, 133 LIVERPOOL ROAD, MANCHESTER, GREATER MANCHESTER, M3 4PU	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016993597 Permit Version: 3 Receiving Water: RIVER IRWELL	Status: VARIED UNDER EPR 2010 Issue date: 09/01/2020 Effective Date: 09/01/2020 Revocation Date: -
N	316m N	GRAPE STREET CSO, GRAPE STREET, MANCHESTER, GREATER MANCHESTER, M60 9EA	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0170 Permit Version: 1 Receiving Water: RIVER IRWELL	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01/01/1995 Revocation Date: 02/09/2010
N	316m N	GRAPE STREET CSO, GRAPE STREET, MANCHESTER, GREATER MANCHESTER, M60 9EA	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0170 Permit Version: 2 Receiving Water: RIVER IRWELL	Status: VARIED UNDER EPR 2010 Issue date: 03/09/2010 Effective Date: 03/09/2010 Revocation Date: 10/01/2017

ID	Location	Address	Details	
N	316m N	GRAPE STREET CSO, GRAPE STREET, MANCHESTER, GREATER MANCHESTER, M60 9EA	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0170 Permit Version: 3 Receiving Water: RIVER IRWELL	Status: VARIED UNDER EPR 2010 Issue date: 11/01/2017 Effective Date: 11/01/2017 Revocation Date: 31/03/2018
24	322m NW	J SAINSBURY PLC SWO, REGENT ROAD, END OF ORDSALL ALNE, SALFORD, GREATER MANCHESTER	Effluent Type: MISCELLANEOUS DISCHARGES - SURFACE WATER Permit Number: 016991422 Permit Version: 1 Receiving Water: RIVER IRWELL	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/11/1994 Revocation Date: 01/11/1994
26	349m SE	OWEN STREET, MANCHESTER, M15 4PZ	Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: EPRFB3091RH Permit Version: 1 Receiving Water: THE RIVER MEDLOCK	Status: SURRENDERED UNDER EPR 2010 Issue date: 04/10/2016 Effective Date: 04/10/2016 Revocation Date: 02/07/2018
27	357m N	WATER STREET CSO	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982993 Permit Version: 1 Receiving Water: RIVER IRWELL	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 23/06/1995 Revocation Date: -
O	362m N	ST JOHNS DEVELOPMENT SETTLEMENT TNK, QUAY STREET, MANCHESTER, LANCASHIRE, M3 2GS	Effluent Type: TRADE DISCHARGES - PROCESS EFFLUENT - NOT WATER COMPANY Permit Number: EPRMB3590DF Permit Version: 1 Receiving Water: TRIBUTARY OF THE RIVER IRWELL	Status: NEW ISSUED UNDER EPR 2010 Issue date: 15/05/2020 Effective Date: 15/05/2020 Revocation Date: -
O	387m N	GRAPE STREET CSO, GRAPE STREET, MANCHESTER, GREATER MANCHESTER, M60 9EA	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0170 Permit Version: 4 Receiving Water: RIVER IRWELL	Status: VARIED UNDER EPR 2010 Issue date: 19/03/2018 Effective Date: 01/04/2018 Revocation Date: -
P	394m SW	CITY RD CSO 288OV, 204 CITY ROAD, MANCHESTER, M15 5JQ	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982954 Permit Version: 1 Receiving Water: MANCHESTER SHIP CANAL	Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: - Effective Date: 23/06/1995 Revocation Date: 30/03/2005

ID	Location	Address	Details	
P	394m SW	MARPLE ST/ROLLS CRES CSO, HULME	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982958 Permit Version: 1 Receiving Water: MANCHESTER SHIP CANAL	Status: CONSENT REVOKED OR REVISED - NEW CONSENT ISSUED (37(1)) Issue date: - Effective Date: 08/08/1995 Revocation Date: 30/03/2005
P	394m SW	CITY RD CSO 288OV, 204 CITY ROAD, MANCHESTER, M15 5JQ	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982954 Permit Version: 2 Receiving Water: MANCHESTER SHIP CANAL	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 07/03/2005 Effective Date: 31/03/2005 Revocation Date: 31/12/2014
P	394m SW	JUNCTION ROLLS CRES/YEW STREET CSO, HULME	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982958 Permit Version: 2 Receiving Water: MANCHESTER SHIP CANAL	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 14/03/2005 Effective Date: 31/03/2005 Revocation Date: 31/12/2014
P	394m SW	JUNCTION ROLLS CRES/YEW STREET CSO, HULME	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982958 Permit Version: 3 Receiving Water: MANCHESTER SHIP CANAL	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 29/03/2010 Effective Date: 01/01/2015 Revocation Date: 25/02/2015
P	394m SW	STRETFORD RD/UPPER MOSS LANE CSO, HULME	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0365 Permit Version: 2 Receiving Water: MANCHESTER SHIP CANAL	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 07/03/2005 Effective Date: 31/03/2005 Revocation Date: 31/12/2014
P	403m SW	CITY RD CSO 288OV, 204 CITY ROAD, MANCHESTER, M15 5JQ	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982954 Permit Version: 4 Receiving Water: VIA SWS MANCHESTER SHIP CANAL	Status: VARIED UNDER EPR 2010 Issue date: 02/07/2018 Effective Date: 02/07/2018 Revocation Date: -

ID	Location	Address	Details	
P	405m SW	CITY RD CSO 288OV, 204 CITY ROAD, MANCHESTER, M15 5JQ	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982954 Permit Version: 3 Receiving Water: MANCHESTER SHIP CANAL	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 29/03/2010 Effective Date: 01/01/2015 Revocation Date: 01/07/2018
P	405m SW	STRETFORD RD/UPPER MOSS LANE CSO, HULME	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0365 Permit Version: 3 Receiving Water: MANCHESTER SHIP CANAL	Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 29/03/2010 Effective Date: 01/01/2015 Revocation Date: -
P	405m SW	JUNCTION ROLLS CRES/YEW STREET CSO, HULME	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016982958 Permit Version: 4 Receiving Water: MANCHESTER SHIP CANAL	Status: VARIED UNDER EPR 2010 Issue date: 26/02/2015 Effective Date: 26/02/2015 Revocation Date: -
Q	468m SW	GARAGE AT HULME HALL RD, HULME HALL ROAD, STOCKPORT, MANCHESTER, GREATER MANCHESTER	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 0168/800 Permit Version: 1 Receiving Water: RIVER IRWELL	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/04/1991 Revocation Date: 31/12/1994
Q	468m SW	GARAGE AT HULME HALL RD, HULME HALL ROAD, STOCKPORT, MANCHESTER, GREATER MANCHESTER	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: 0168/800 Permit Version: 2 Receiving Water: RIVER IRWELL	Status: REVOKED - UNSPECIFIED Issue date: - Effective Date: 01/01/1995 Revocation Date: 16/04/2002
S	483m N	WATER ST/NEW QUAY ST CSO, WATER STREET NEW QUAY STREET, SPINNINGFIELDS, MANCHESTER, GREATER MANCHESTER, M3 4JQ	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016993831 Permit Version: 1 Receiving Water: THE RIVER IRWELL	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 21/03/2006 Effective Date: 21/03/2006 Revocation Date: 01/10/2019
30	488m NW	HAMPTON ST/ORDSALL LANE, SALFORD	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01SAL0183 Permit Version: 1 Receiving Water: -	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01/01/1995 Revocation Date: -

ID	Location	Address	Details	
S	488m N	WATER ST/NEW QUAY ST CSO, WATER STREET NEW QUAY STREET, SPINNINGFIELDS, MANCHESTER, GREATER MANCHESTER, M3 4JQ	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 016993831 Permit Version: 2 Receiving Water: THE RIVER IRWELL	Status: VARIED UNDER EPR 2010 Issue date: 02/10/2019 Effective Date: 02/10/2019 Revocation Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

4.14 Pollutant release to surface waters (Red List)

Records within 500m	**0**

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.15 Pollutant release to public sewer

Records within 500m	**0**

Discharges of Special Category Effluents to the public sewer.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.16 List 1 Dangerous Substances

Records within 500m	**0**

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.17 List 2 Dangerous Substances

Records within 500m	**0**

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.18 Pollution Incidents (EA/NRW)

Records within 500m	**7**

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

Features are displayed on the Current industrial land use map on **page 74**

ID	Location	Details	
11	169m NW	Incident Date: 12/06/2001 Incident Identification: 8739 Pollutant: Oils and Fuel Pollutant Description: Diesel	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
25	332m SW	Incident Date: 15/03/2001 Incident Identification: 362 Pollutant: Oils and Fuel Pollutant Description: Unidentified Oil	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
29	395m SW	Incident Date: 06/06/2001 Incident Identification: 7808 Pollutant: Sewage Materials Pollutant Description: Process Effluent	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
Q	401m SW	Incident Date: 03/08/2001 Incident Identification: 21600 Pollutant: Specific Waste Materials:Specific Waste Materials Pollutant Description: Tyres:Vehicles and Vehicle Parts	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
Q	401m SW	Incident Date: 03/08/2001 Incident Identification: 21600 Pollutant: Specific Waste Materials Pollutant Description: Tyres	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
Q	401m SW	Incident Date: 03/08/2001 Incident Identification: 21600 Pollutant: Specific Waste Materials Pollutant Description: Vehicles and Vehicle Parts	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 3 (Minor)
Q	439m SW	Incident Date: 22/01/2003 Incident Identification: 132648 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

This data is sourced from the Environment Agency and Natural Resources Wales.

4.19 Pollution inventory substances

Records within 500m	0

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.20 Pollution inventory waste transfers

Records within 500m	0

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

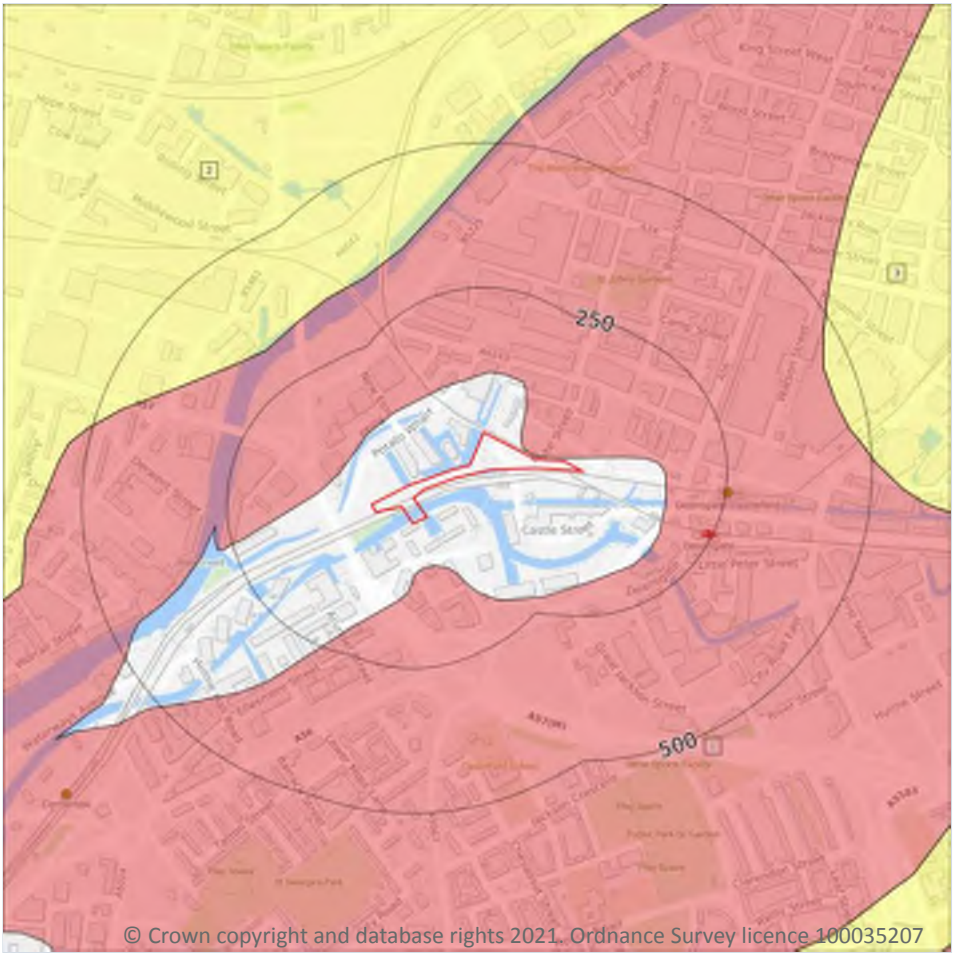
4.21 Pollution inventory radioactive waste

Records within 500m	0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

5 Hydrogeology - Superficial aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive
- Unknown

5.1 Superficial aquifer

Records within 500m	3

Aquifer status of groundwater held within superficial geology.

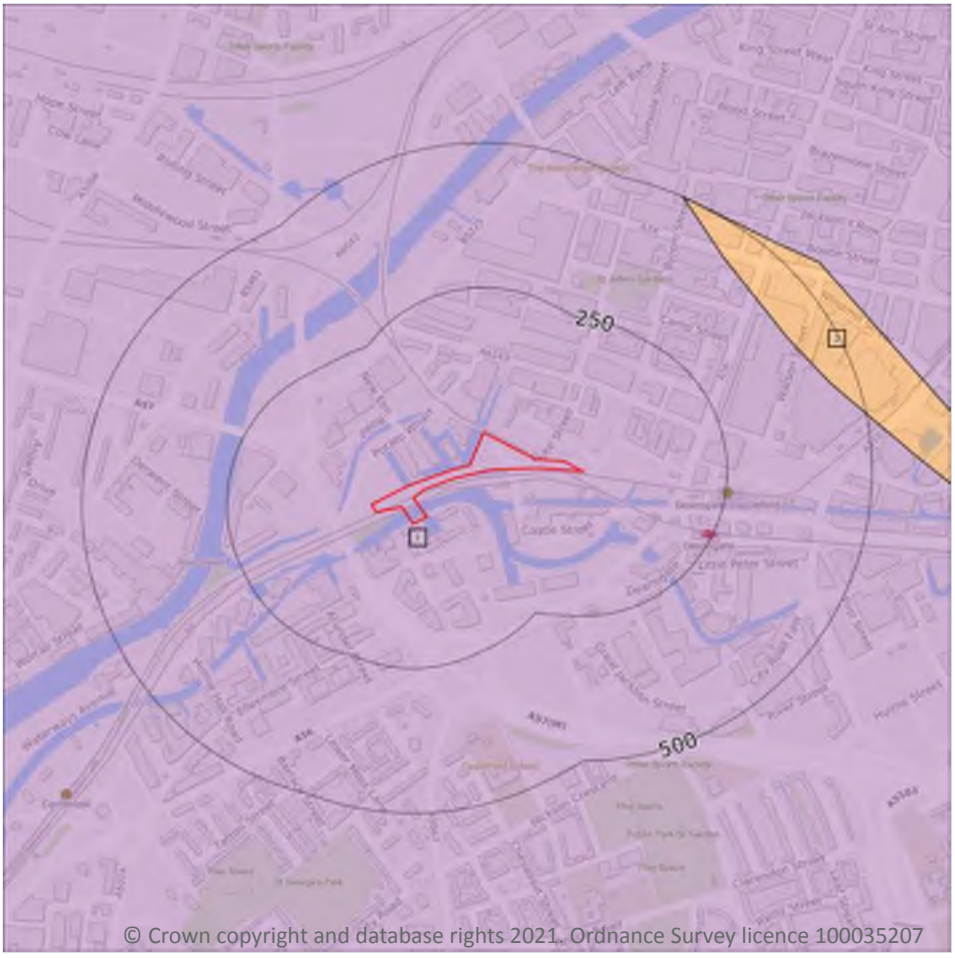
Features are displayed on the Hydrogeology map on **page 91**

ID	Location	Designation	Description
1	5m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	322m NW	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

ID	Location	Designation	Description
3	452m E	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Bedrock aquifer



Site Outline

Search buffers in metres (m)

- Principal
- Secondary A
- Secondary B
- Secondary Undifferentiated
- Unproductive

5.2 Bedrock aquifer

Records within 500m	2

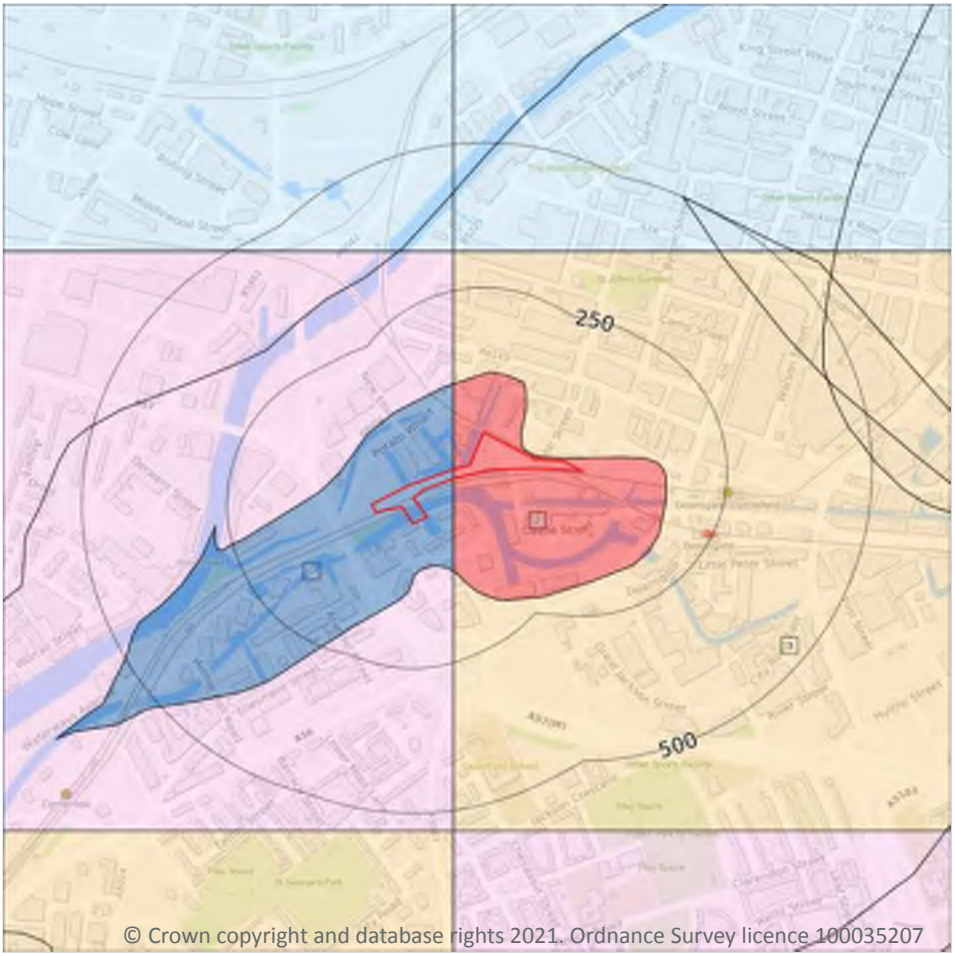
Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 93**

ID	Location	Designation	Description
1	**On site**	**Principal**	**Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers**
2	420m NE	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeablehorizons and weathering. These are generally the water-bearing parts of the former non-aquifers

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m	3

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 95**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	**On site**	**Summary Classification: Principal bedrock aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: High Infiltration value: <40% Dilution value: 300-550mm/year**	**Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: >90% Recharge potential: Low**	**Vulnerability: Low Aquifer type: Principal Flow mechanism: Mixed**
2	**On site**	**Summary Classification: Principal bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer**	**Leaching class: High Infiltration value: >70% Dilution value: 300-550mm/year**	**Vulnerability: - Aquifer type: - Thickness: 3-10m Patchiness value: <90% Recharge potential: High**	**Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures**
3	4m N	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300-550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: High	Vulnerability: High Aquifer type: Principal Flow mechanism: Well connected fractures

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

This data is sourced from the British Geological Survey and the Environment Agency.

5.5 Groundwater vulnerability- local information

Records on site	0

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk.

This data is sourced from the British Geological Survey and the Environment Agency.

Abstractions and Source Protection Zones



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Site Outline

Search buffers in metres (m)

- Source Protection Zone 1 — Inner catchment
- Source Protection Zone 2 — Outer catchment
- Source Protection Zone 3 — Total catchment
- Source Protection Zone 4 — Zone of Special Interest
- Source Protection Zone 1c — Inner catchment - confined aquifer
- Source Protection Zone 2c — Outer catchment - confined aquifer
- Source Protection Zone 3c — Total catchment - confined aquifer
- Drinking water abstraction licences
- Drinking water abstraction licences — Polygon features
- Drinking water abstraction licences — Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m	47

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 97**

ID	Location	Details	
1	306m N	Status: Historical Licence No: NW/069/0004/019 Details: Transfer Between Sources (Post Water Act 2003) Direct Source: Ground Water - North West Region Point: ST JOHNS MANCHESTER Data Type: Poly4 Name: Manchester Quays Development (MGY) Ltd Easting: 383094 Northing: 398099	Annual Volume (m^3): 543,120 Max Daily Volume (m^3): 1,488 Original Application No: - Original Start Date: 13/09/2019 Expiry Date: 31/12/2020 Issue No: 1 Version Start Date: 13/09/2019 Version End Date: -
3	535m NE	Status: Historical Licence No: 2569007089 Details: Non-Evaporative Cooling Direct Source: Ground Water - North West Region Point: 2 BOREHOLES AT GARTSIDE STREET MANCHESTER Data Type: Line Name: HER MAJESTY'S COURT SERVICE Easting: 383335 Northing: 398310	Annual Volume (m^3): 200000 Max Daily Volume (m^3): 1179 Original Application No: - Original Start Date: 26/01/2005 Expiry Date: 31/03/2011 Issue No: 2 Version Start Date: 10/07/2008 Version End Date: -
-	956m NE	Status: Historical Licence No: 2569007069 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT GEORGE ST, MANCHESTER" Data Type: Point Name: BRITISH TELECOM Easting: 384100 Northing: 398000	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 27/01/1971 Expiry Date: - Issue No: 100 Version Start Date: 27/01/1971 Version End Date: -
-	956m NE	Status: Historical Licence No: 2569007069 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT GEORGE ST, MANCHESTER Data Type: Point Name: BRITISH TELECOMMUNICATIONS PLC Easting: 384100 Northing: 398000	Annual Volume (m^3): 1100 Max Daily Volume (m^3): 860 Original Application No: - Original Start Date: 01/04/1984 Expiry Date: - Issue No: 100 Version Start Date: 01/04/2007 Version End Date: -

ID	Location	Details	
-	1004m SE	Status: Active Licence No: NW/069/0004/003 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT MANCHESTER METROPOLITAN UNIVERSITY Data Type: Point Name: Manchester Metropolitan University Easting: 383715 Northing: 396746	Annual Volume (m^3): 274,115 Max Daily Volume (m^3): 751 Original Application No: - Original Start Date: 20/09/2013 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 01/01/2015 Version End Date: -
-	1004m SE	Status: Active Licence No: NW/069/0004/003 Details: Heat Pump Direct Source: Ground Water - North West Region Point: BOREHOLE AT MANCHESTER METROPOLITAN UNIVERSITY Data Type: Point Name: Manchester Metropolitan University Easting: 383715 Northing: 396746	Annual Volume (m^3): 274,115 Max Daily Volume (m^3): 751 Original Application No: - Original Start Date: 20/09/2013 Expiry Date: 31/03/2027 Issue No: 1 Version Start Date: 01/01/2015 Version End Date: -
-	1017m NW	Status: Historical Licence No: 2569007085 Details: Process water Direct Source: Ground Water - North West Region Point: "BOREHOLE AT HOPE STREET, SALFORD, MANCHESTER" Data Type: Point Name: READY MIXED CONCRETE (NORTH WEST) LIMITED Easting: 382190 Northing: 398330	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 01/11/2000 Expiry Date: - Issue No: 1 Version Start Date: 01/11/2000 Version End Date: -
-	1017m NW	Status: Active Licence No: 2569007085 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT HOPE STREET, SALFORD, MANCHESTER Data Type: Point Name: CEMEX UK MATERIALS LTD Easting: 382190 Northing: 398330	Annual Volume (m^3): 23,000 Max Daily Volume (m^3): 115 Original Application No: - Original Start Date: 01/11/2000 Expiry Date: - Issue No: 4 Version Start Date: 21/12/2018 Version End Date: -

ID	Location	Details	
-	1094m SE	Status: Active Licence No: NW/069/0006/003 Details: Heat Pump Direct Source: Ground Water - North West Region Point: BOREHOLE 1 AT LOWER CHATHAM STREET Data Type: Point Name: Manchester Metropolitan University Easting: 384180 Northing: 397091	Annual Volume (m^3): 283,240 Max Daily Volume (m^3): 1,532 Original Application No: - Original Start Date: 04/04/2014 Expiry Date: 31/03/2027 Issue No: 2 Version Start Date: 04/04/2014 Version End Date: -
-	1094m SE	Status: Active Licence No: NW/069/0006/003 Details: General Use Relating To Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE 1 AT LOWER CHATHAM STREET Data Type: Point Name: Manchester Metropolitan University Easting: 384180 Northing: 397091	Annual Volume (m^3): 283,240 Max Daily Volume (m^3): 1,532 Original Application No: - Original Start Date: 04/04/2014 Expiry Date: 31/03/2027 Issue No: 2 Version Start Date: 04/04/2014 Version End Date: -
-	1161m E	Status: Historical Licence No: NW0690006001 Details: Non-Evaporative Cooling Direct Source: Ground Water - North West Region Point: BOREHOLES AT ORIGIN DEVELOPMENTS, MANCHESTER Data Type: Point Name: West Contracting Easting: 384378 Northing: 397733	Annual Volume (m^3): 139128 Max Daily Volume (m^3): 1010 Original Application No: - Original Start Date: 19/01/2009 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 19/01/2009 Version End Date: -
-	1161m E	Status: Historical Licence No: NW/069/0006/001 Details: Non-Evaporative Cooling Direct Source: Ground Water - North West Region Point: BOREHOLES AT ORIGIN DEVELOPMENTS, MANCHESTER Data Type: Point Name: West Contracting Easting: 384378 Northing: 397733	Annual Volume (m^3): 139128 Max Daily Volume (m^3): 1010 Original Application No: - Original Start Date: 19/01/2009 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 19/01/2009 Version End Date: -

ID	Location	Details	
-	1177m NE	Status: Historical Licence No: 2569007070 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT DIAL HOUSE, CHAPEL ST, SALFORD" Data Type: Point Name: BRITISH TELECOM Easting: 383700 Northing: 398700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 27/01/1971 Expiry Date: - Issue No: 100 Version Start Date: 27/01/1971 Version End Date: -
-	1177m NE	Status: Historical Licence No: 2569007070 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT DIAL HOUSE, CHAPEL ST, SALFORD Data Type: Point Name: BRITISH TELECOMMUNICATIONS PLC Easting: 383700 Northing: 398700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 27/01/1971 Expiry Date: - Issue No: 101 Version Start Date: 01/04/1984 Version End Date: -
-	1177m NE	Status: Active Licence No: 2569007070 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT DIAL HOUSE CHAPEL STREET SALFORD Data Type: Point Name: BRITISH TELECOMMUNICATIONS PLC Easting: 383700 Northing: 398700	Annual Volume (m^3): 45 Max Daily Volume (m^3): 30 Original Application No: - Original Start Date: 27/01/1971 Expiry Date: - Issue No: 101 Version Start Date: 01/04/2007 Version End Date: -
-	1524m SW	Status: Historical Licence No: 2569007002 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT 371 ORDSALL LANE, MANCHESTER 5" Data Type: Point Name: COLGATE PALMOLIVE LTD Easting: 381600 Northing: 396700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 08/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 05/12/1985 Version End Date: -

ID	Location	Details	
-	1524m SW	Status: Historical Licence No: 2569007002 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT 371 ORDSALL LANE, MANCHESTER 5 Data Type: Point Name: Cerep III Investment R Sarl Easting: 381600 Northing: 396700	Annual Volume (m^3): 409140 Max Daily Volume (m^3): 1636.56 Original Application No: - Original Start Date: 08/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 29/10/2009 Version End Date: -
-	1674m N	Status: Historical Licence No: 2569004023 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "BOREHOLE (NO 2) AT PREMISES, STRANGEWAYS, MANCHESTER" Data Type: Point Name: INTERBREW UK LTD Easting: 383820 Northing: 399190	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 09/08/2000 Version End Date: -
-	1674m N	Status: Historical Licence No: 2569004023 Details: Process water Direct Source: Ground Water - North West Region Point: "BOREHOLE (NO 2) AT PREMISES, STRANGEWAYS, MANCHESTER" Data Type: Point Name: INTERBREW UK LTD Easting: 383820 Northing: 399190	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 09/08/2000 Version End Date: -
-	1674m N	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE (NO 2) AT PREMISES, STRANGEWAYS, MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383820 Northing: 399190	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -

ID	Location	Details	
-	1674m N	Status: Historical Licence No: 2569004023 Details: Process water Direct Source: Ground Water - North West Region Point: BOREHOLE (NO 2) AT PREMISES, STRANGEWAYS, MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383820 Northing: 399190	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -
-	1674m N	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE NUMBER 2 AT PREMISES STRANGEWAYS MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383820 Northing: 399190	Annual Volume (m^3): 500000 Max Daily Volume (m^3): 2500 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -
-	1674m N	Status: Historical Licence No: 2569004023 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE NUMBER 2 AT PREMISES STRANGEWAYS MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383820 Northing: 399190	Annual Volume (m^3): 500000 Max Daily Volume (m^3): 2500 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -
-	1705m S	Status: Historical Licence No: 2569007009 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT PREMISES, MOSS LANE WEST MANCHESTER" Data Type: Point Name: HYDES BREWERY LTD Easting: 383220 Northing: 395850	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 21/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 07/10/2000 Version End Date: -

ID	Location	Details	
-	1705m S	Status: Historical Licence No: 2569007009 Details: Process water Direct Source: Ground Water - North West Region Point: "BOREHOLE AT PREMISES, MOSS LANE WEST MANCHESTER" Data Type: Point Name: HYDES BREWERY LTD Easting: 383220 Northing: 395850	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 21/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 07/10/2000 Version End Date: -
-	1705m S	Status: Historical Licence No: 2569007009 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, MOSS LANE WEST MANCHESTER Data Type: Point Name: HYDES BREWERY LTD Easting: 383220 Northing: 395850	Annual Volume (m^3): 66826.2 Max Daily Volume (m^3): 372.772 Original Application No: - Original Start Date: 21/02/1966 Expiry Date: - Issue No: 101 Version Start Date: 07/10/2000 Version End Date: -
-	1705m S	Status: Historical Licence No: 2569007009 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, MOSS LANE WEST MANCHESTER Data Type: Point Name: HYDES BREWERY LTD Easting: 383220 Northing: 395850	Annual Volume (m^3): 66826.2 Max Daily Volume (m^3): 372.772 Original Application No: - Original Start Date: 21/02/1966 Expiry Date: - Issue No: 103 Version Start Date: 19/07/2018 Version End Date: -
-	1706m N	Status: Historical Licence No: 2569004023 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "BOREHOLE (NO 3) AT PREMISES, STRANGEWAYS, MANCHESTER" Data Type: Point Name: INTERBREW UK LTD Easting: 383830 Northing: 399220	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 09/08/2000 Version End Date: -

ID	Location	Details	
-	1706m N	Status: Historical Licence No: 2569004023 Details: Process water Direct Source: Ground Water - North West Region Point: "BOREHOLE (NO 3) AT PREMISES, STRANGEWAYS, MANCHESTER" Data Type: Point Name: INTERBREW UK LTD Easting: 383830 Northing: 399220	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 09/08/2000 Version End Date: -
-	1706m N	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE (NO 3) AT PREMISES, STRANGEWAYS, MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383830 Northing: 399220	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -
-	1706m N	Status: Historical Licence No: 2569004023 Details: Process water Direct Source: Ground Water - North West Region Point: BOREHOLE (NO 3) AT PREMISES, STRANGEWAYS, MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383830 Northing: 399220	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -
-	1706m N	Status: Historical Licence No: 2569004023 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE NUMBER 3 AT PREMISES STRANGEWAYS MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383830 Northing: 399220	Annual Volume (m^3): 500000 Max Daily Volume (m^3): 2500 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -

ID	Location	Details	
-	1706m N	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE NUMBER 3 AT PREMISES STRANGEWAYS MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383830 Northing: 399220	Annual Volume (m^3): 500000 Max Daily Volume (m^3): 2500 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -
-	1741m N	Status: Historical Licence No: 2569004023 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "BOREHOLE (NO 1) AT PREMISES, STRANGEWAYS, MANCHESTER" Data Type: Point Name: INTERBREW UK LTD Easting: 383850 Northing: 399250	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 09/08/2000 Version End Date: -
-	1741m N	Status: Historical Licence No: 2569004023 Details: Process water Direct Source: Ground Water - North West Region Point: "BOREHOLE (NO 1) AT PREMISES, STRANGEWAYS, MANCHESTER" Data Type: Point Name: INTERBREW UK LTD Easting: 383850 Northing: 399250	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 09/08/2000 Version End Date: -
-	1741m N	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE (NO 1) AT PREMISES, STRANGEWAYS, MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383850 Northing: 399250	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -

ID	Location	Details	
-	1741m N	Status: Historical Licence No: 2569004023 Details: Process water Direct Source: Ground Water - North West Region Point: BOREHOLE (NO 1) AT PREMISES, STRANGEWAYS, MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383850 Northing: 399250	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -
-	1741m N	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE NUMBER 1 AT PREMISES STRANGEWAYS MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383850 Northing: 399250	Annual Volume (m^3): 500000 Max Daily Volume (m^3): 2500 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -
-	1741m N	Status: Historical Licence No: 2569004023 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE NUMBER 1 AT PREMISES STRANGEWAYS MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383850 Northing: 399250	Annual Volume (m^3): 500000 Max Daily Volume (m^3): 2500 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -
-	1828m S	Status: Active Licence No: 2569007007 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES MOSS SIDE MANCHESTER Data Type: Point Name: Heineken UK Ltd Easting: 383865 Northing: 395909	Annual Volume (m^3): 227,000 Max Daily Volume (m^3): 900 Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 103 Version Start Date: 08/05/2014 Version End Date: -

ID	Location	Details	
-	1828m S	Status: Active Licence No: 2569007007 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES MOSS SIDE MANCHESTER Data Type: Point Name: Heineken UK Ltd Easting: 383865 Northing: 395909	Annual Volume (m^3): 227,000 Max Daily Volume (m^3): 900 Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 103 Version Start Date: 08/05/2014 Version End Date: -
-	1849m S	Status: Historical Licence No: 2569007007 Details: Process water Direct Source: Ground Water - North West Region Point: "BOREHOLE AT PREMISES, MOSS SIDE, MANCHESTER" Data Type: Point Name: SCOTTISH COURAGE BREWING LTD Easting: 383900 Northing: 395900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/08/1995 Version End Date: -
-	1849m S	Status: Historical Licence No: 2569007007 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT PREMISES, MOSS SIDE, MANCHESTER" Data Type: Point Name: SCOTTISH COURAGE BREWING LTD Easting: 383900 Northing: 395900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 16/08/1995 Version End Date: -
-	1849m S	Status: Historical Licence No: 2569007007 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, MOSS SIDE, MANCHESTER Data Type: Point Name: SCOTTISH COURAGE BREWING LTD Easting: 383900 Northing: 395900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 31/12/2003 Version End Date: -

ID	Location	Details	
-	1849m S	Status: Historical Licence No: 2569007007 Details: Process water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, MOSS SIDE, MANCHESTER Data Type: Point Name: SCOTTISH COURAGE BREWING LTD Easting: 383900 Northing: 395900	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 31/12/2003 Version End Date: -
-	1849m S	Status: Historical Licence No: 2569007007 Details: General Cooling (Existing Licences Only) (High Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES MOSS SIDE MANCHESTER Data Type: Point Name: Heineken UK Ltd Easting: 383900 Northing: 395900	Annual Volume (m^3): 227000 Max Daily Volume (m^3): 900 Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 23/11/2009 Version End Date: -
-	1849m S	Status: Historical Licence No: 2569007007 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES MOSS SIDE MANCHESTER Data Type: Point Name: Heineken UK Ltd Easting: 383900 Northing: 395900	Annual Volume (m^3): 227000 Max Daily Volume (m^3): 900 Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 23/11/2009 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.7 Surface water abstractions

Records within 2000m	**6**

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 97**

ID	Location	Details	
A	394m SW	Status: Historical Licence No: 2569007053 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "R IRWELL AT IRWELL WORKS, ORDSALL LANE, SALFORD" Data Type: Point Name: CDS COMPUTER DESIGN SYSTEMS LTD Easting: 382500 Northing: 397400	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 22/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/11/1987 Version End Date: -
A	394m SW	Status: Historical Licence No: 2569007053 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: R IRWELL AT IRWELL WORKS, ORDSALL LANE, SALFORD Data Type: Point Name: CDS COMPUTER DESIGN SYSTEMS LTD Easting: 382500 Northing: 397400	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 22/01/1966 Expiry Date: - Issue No: 100 Version Start Date: 01/11/1987 Version End Date: -
-	1524m SW	Status: Historical Licence No: 2569007001 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: "Surface, Non-Tidal - North West Region" Point: "MANCHESTER SHIP CANAL AT PREMISES, ORDSALL LANE, MANCHESTER" Data Type: Point Name: COLGATE PALMOLIVE LTD Easting: 381600 Northing: 396700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/04/1992 Version End Date: -
-	1524m SW	Status: Historical Licence No: 2569007001 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: MANCHESTER SHIP CANAL AT PREMISES, ORDSALL LANE, MANCHESTER Data Type: Point Name: COLGATE PALMOLIVE LTD Easting: 381600 Northing: 396700	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 27/04/1992 Version End Date: -

ID	Location	Details	
-	1524m SW	Status: Historical Licence No: 2569007001 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: MANCHESTER SHIP CANAL AT PREMISES ORDSALL LANE MANCHESTER Data Type: Point Name: Cerep III Investment R Sarl Easting: 381600 Northing: 396700	Annual Volume (m^3): 1,363,800 Max Daily Volume (m^3): 4909.68 Original Application No: - Original Start Date: 15/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 29/10/2009 Version End Date: -
-	1965m W	Status: Active Licence No: 2569007074 Details: General Cooling (Existing Licences Only) (Low Loss) Direct Source: Surface, Non-Tidal - North West Region Point: MANCHESTER SHIP CANAL AND DOCKS AT SALFORD QUAYS Data Type: Point Name: PEEL SOUTH EAST LTD Easting: 380900 Northing: 397400	Annual Volume (m^3): 318,056 Max Daily Volume (m^3): 3,350.40 Original Application No: - Original Start Date: 05/04/1990 Expiry Date: - Issue No: 105 Version Start Date: 01/04/2015 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.8 Potable abstractions

Records within 2000m	**9**

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 97**

ID	Location	Details	
-	1674m N	Status: Historical Licence No: 2569004023 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "BOREHOLE (NO 2) AT PREMISES, STRANGEWAYS, MANCHESTER" Data Type: Point Name: INTERBREW UK LTD Easting: 383820 Northing: 399190	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 09/08/2000 Version End Date: -

ID	Location	Details	
-	1674m N	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE (NO 2) AT PREMISES, STRANGEWAYS, MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383820 Northing: 399190	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -
-	1674m N	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE NUMBER 2 AT PREMISES STRANGEWAYS MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383820 Northing: 399190	Annual Volume (m^3): 500000 Max Daily Volume (m^3): 2500 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -
-	1706m N	Status: Historical Licence No: 2569004023 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "BOREHOLE (NO 3) AT PREMISES, STRANGEWAYS, MANCHESTER" Data Type: Point Name: INTERBREW UK LTD Easting: 383830 Northing: 399220	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 09/08/2000 Version End Date: -
-	1706m N	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE (NO 3) AT PREMISES, STRANGEWAYS, MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383830 Northing: 399220	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -

ID	Location	Details	
-	1706m N	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE NUMBER 3 AT PREMISES STRANGEWAYS MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383830 Northing: 399220	Annual Volume (m^3): 500000 Max Daily Volume (m^3): 2500 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -
-	1741m N	Status: Historical Licence No: 2569004023 Details: "Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services" Direct Source: Ground Water - North West Region Point: "BOREHOLE (NO 1) AT PREMISES, STRANGEWAYS, MANCHESTER" Data Type: Point Name: INTERBREW UK LTD Easting: 383850 Northing: 399250	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 09/08/2000 Version End Date: -
-	1741m N	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE (NO 1) AT PREMISES, STRANGEWAYS, MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383850 Northing: 399250	Annual Volume (m^3): - Max Daily Volume (m^3): - Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -
-	1741m N	Status: Historical Licence No: 2569004023 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Commercial/Industrial/Public Services Direct Source: Ground Water - North West Region Point: BOREHOLE NUMBER 1 AT PREMISES STRANGEWAYS MANCHESTER Data Type: Point Name: INTERBREW UK LTD Easting: 383850 Northing: 399250	Annual Volume (m^3): 500000 Max Daily Volume (m^3): 2500 Original Application No: - Original Start Date: 18/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 01/01/2004 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.9 Source Protection Zones

Records within 500m	1

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

Features are displayed on the Abstractions and Source Protection Zones map on **page 97**

ID	Location	Type	Description
2	474m E	3	Total catchment

This data is sourced from the Environment Agency and Natural Resources Wales.

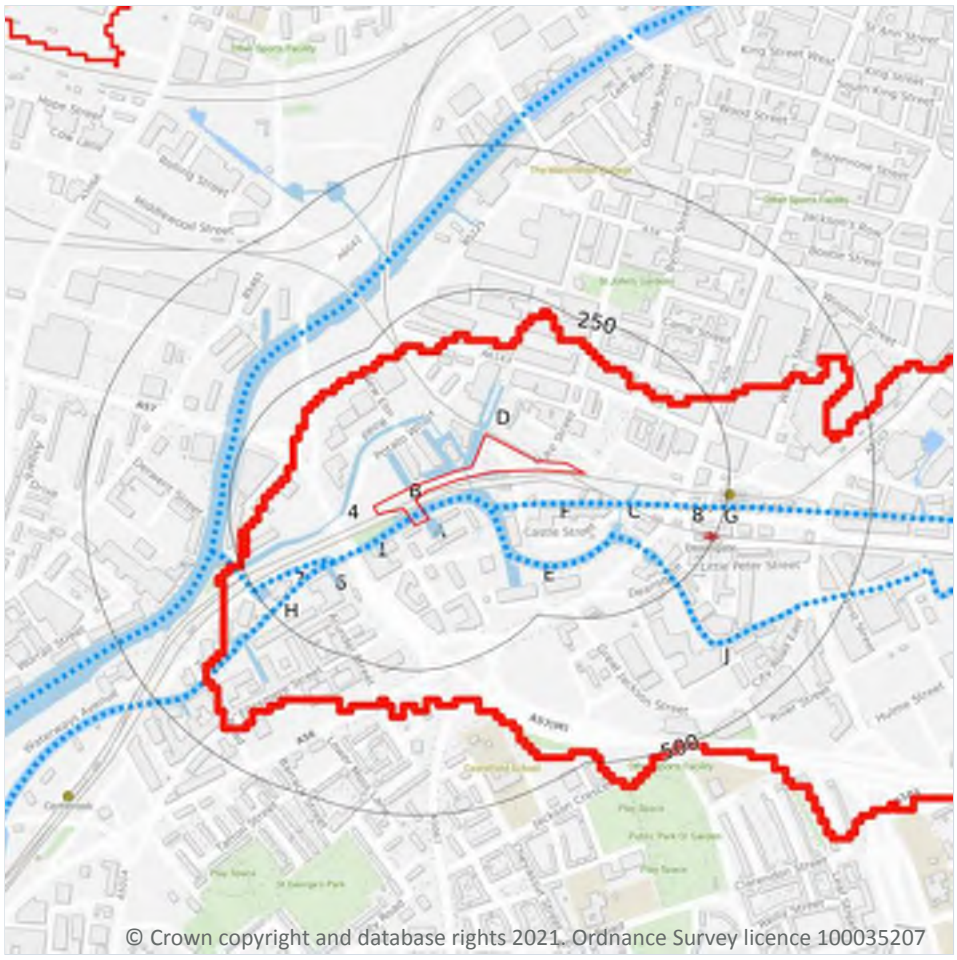
5.10 Source Protection Zones (confined aquifer)

Records within 500m	0

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.

6 Hydrology



Site Outline

Search buffers in metres (m)

Water Network (OS MasterMap)

Surface water features (wider than 5m)

Surface water features (narrower than 5m)

WFD River, canal and surface water transfer water bodies

WFD Lake water bodies

WFD Transitional and coastal water bodies

WFD Surface water body catchments boundaries

WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m	**36**

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on **page 115**

ID	Location	Type of water feature	Ground level	Permanence	Name
1	**On site**	**Canal. A manmade watercourse for inland navigation.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**Bridgewater Canal**

ID	Location	Type of water feature	Ground level	Permanence	Name
A	**On site**	**Canal. A manmade watercourse for inland navigation.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
A	**On site**	**Canal. A manmade watercourse for inland navigation.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**River Medlock**
B	**On site**	**Canal. A manmade watercourse for inland navigation.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**-**
A	**On site**	**Canal. A manmade watercourse for inland navigation.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**River Medlock**
A	**On site**	**Canal. A manmade watercourse for inland navigation.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**River Medlock**
A	**On site**	**Canal. A manmade watercourse for inland navigation.**	**On ground surface**	**Watercourse contains water year round (in normal circumstances)**	**Bridgewater Canal**
A	8m N	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Medlock
A	8m N	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	11m NW	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
D	11m NW	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	36m S	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bridgewater Canal
4	48m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Medlock
F	50m S	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Rochdale Canal

ID	Location	Type of water feature	Ground level	Permanence	Name
A	55m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Medlock
A	57m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Medlock
A	58m N	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	River Medlock
E	59m S	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bridgewater Canal
C	84m SE	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Rochdale Canal
C	84m SE	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bridgewater Canal
C	87m SE	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bridgewater Canal
C	90m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	90m SE	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Rochdale Canal
C	107m SE	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bridgewater Canal
C	120m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Medlock
6	127m SW	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
7	130m SW	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
H	130m SW	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Bridgewater Canal
C	155m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	River Medlock
8	157m E	Canal. A manmade watercourse for inland navigation.	Underground	Watercourse contains water year round (in normal circumstances)	Rochdale Canal
C	172m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Medlock
C	200m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Medlock
G	225m E	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Rochdale Canal
H	233m SW	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
H	236m SW	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
J	238m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Medlock

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	**12**

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on **page 115**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site	1

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on **page 115**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
C	**On site**	**River WB catchment**	**Medlock (Lumb Brook to Irwell)**	**GB112069061152**	**Roch Irk Medlock**	**Irwell**

This data is sourced from the Environment Agency and Natural Resources Wales.

6.4 WFD Surface water bodies

Records identified	3

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on **page 115**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
2	**On site**	**River**	**Medlock (Lumb Brook to Irwell)**	**GB112069061152**	**Moderate**	**Good**	**Moderate**	**2016**
G	51m S	Canal	Rochdale Canal, western section	GB71210517	Moderate	Good	Moderate	2016
I	112m SW	Canal	Bridgewater Canal	GB71210001	Moderate	Good	Moderate	2016

This data is sourced from the Environment Agency and Natural Resources Wales.

6.5 WFD Groundwater bodies

Records on site	1

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 115**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	**On site**	**Manchester and East Cheshire Permo-Triassic Sandstone Aquifers**	**GB41201G101100**	**Poor**	**Poor**	**Poor**	**2015**

This data is sourced from the Environment Agency and Natural Resources Wales.

7 River and coastal flooding



Site Outline

Search buffers in metres (m)

Environment Agency river and coastal flooding:

- High
- Medium
- Low
- Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

7.1 Risk of Flooding from Rivers and Sea (RoFRaS)

Records within 50m	15

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance).

Features are displayed on the River and coastal flooding map on **page 121**

Distance	RoFRaS flood risk
On site	**High**
0 - 50m	High

This data is sourced from the Environment Agency and Natural Resources Wales.

7.2 Historical Flood Events

Records within 250m	1

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

Features are displayed on the River and coastal flooding map on **page 121**

ID	Location	Event name	Date of flood	Flood source	Flood cause	Type of flood
A	**On site**	**Ea01326_21dec1991_Bridgewatercanal_Castlefield**	**1991-12-21 1991-12-22**	**Other**	**Other**	**No data**

This data is sourced from the Environment Agency and Natural Resources Wales.

7.3 Flood Defences

Records within 250m	0

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.4 Areas Benefiting from Flood Defences

Records within 250m	0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.5 Flood Storage Areas

Records within 250m	0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.

River and coastal flooding - Flood Zones



Site Outline

Search buffers in metres (m)

Flood zone 2

Flood zone 3

7.6 Flood Zone 2

Records within 50m	1

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

Features are displayed on the River and coastal flooding map on **page 121**

Location	Type
On site	**Zone 2 - (Fluvial /Tidal Models)**

This data is sourced from the Environment Agency and Natural Resources Wales.

7.7 Flood Zone 3

Records within 50m	1

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

Features are displayed on the River and coastal flooding map on **page 121**

Location	Type
On site	**Zone 3 - (Fluvial Models)**

This data is sourced from the Environment Agency and Natural Resources Wales.

8 Surface water flooding



Site Outline
Search buffers in metres (m)

1 in 1000 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site	**1 in 250 year, 0.1m - 0.3m**
Highest risk within 50m	**1 in 30 year, 0.3m - 1.0m**

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on **page 126**

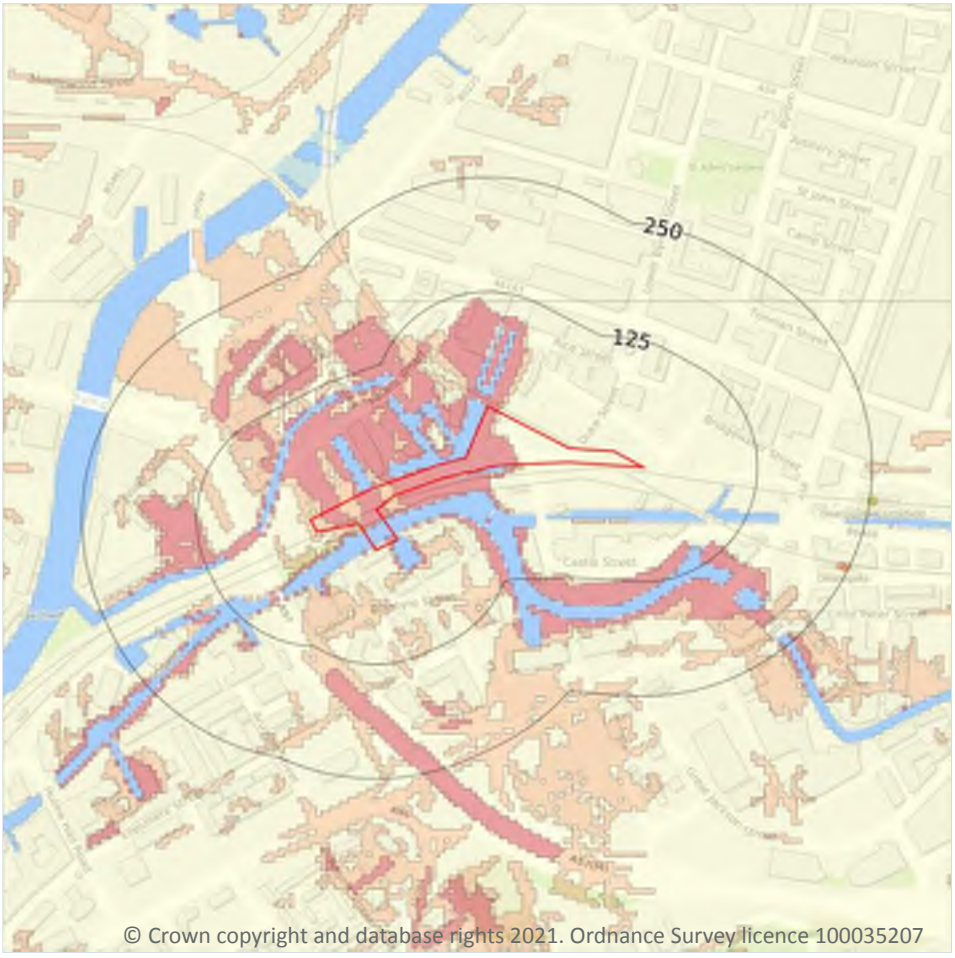
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Between 0.3m and 1.0m
1 in 250 year	Between 0.1m and 0.3m
1 in 100 year	Between 0.1m and 0.3m
1 in 30 year	Negligible

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



Site Outline

Search buffers in metres (m)

High

Moderate - High

Moderate

Low

Negligible

9.1 Groundwater flooding

Highest risk on site	**High**
Highest risk within 50m	**High**

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on **page 128**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m	0

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m	0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.3 Special Areas of Conservation (SAC)

Records within 2000m	0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m	0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.5 National Nature Reserves (NNR)

Records within 2000m	0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.6 Local Nature Reserves (LNR)

Records within 2000m	0

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m	0

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.8 Biosphere Reserves

Records within 2000m	0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.9 Forest Parks

Records within 2000m	0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m	0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.11 Green Belt

Records within 2000m	0

Areas designated to prevent urban sprawl by keeping land permanently open.

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m	0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m	0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m	0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m	0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

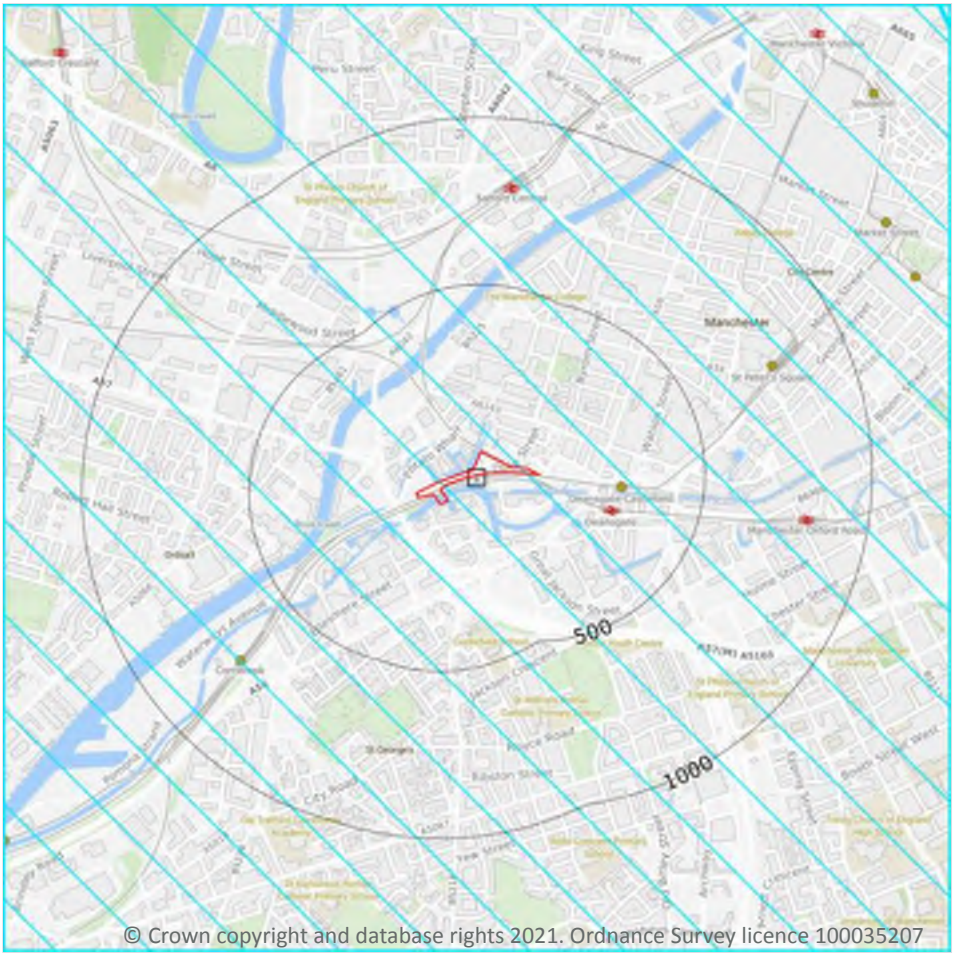
Records within 2000m	3

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
761m NW	Irwell / Man. Ship Canal (Kearsley to Irlam Locks) NVZ	Surface Water	S643	Existing
1278m NE	River Irk (Moston Brook to River Irwell) NVZ	Surface Water	S638	Existing
1282m N	River Irk (Moston Brook to River Irwell) NVZ	Surface Water	S638	Existing

This data is sourced from Natural England and Natural Resources Wales.

SSSI Impact Zones and Units



Site Outline

Search buffers in metres (m)

SSSI Impact Risk Zones

SSSI Units

Not recorded

Favourable

Unfavourable - Recovering

Unfavourable - No change

Unfavourable - Declining

Partially destroyed

Destroyed

10.17 SSSI Impact Risk Zones

Records on site	1

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on **page 133**

ID	Location	Type of developments requiring consultation
1	**On site**	**Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons > 4000m². Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion**

This data is sourced from Natural England.

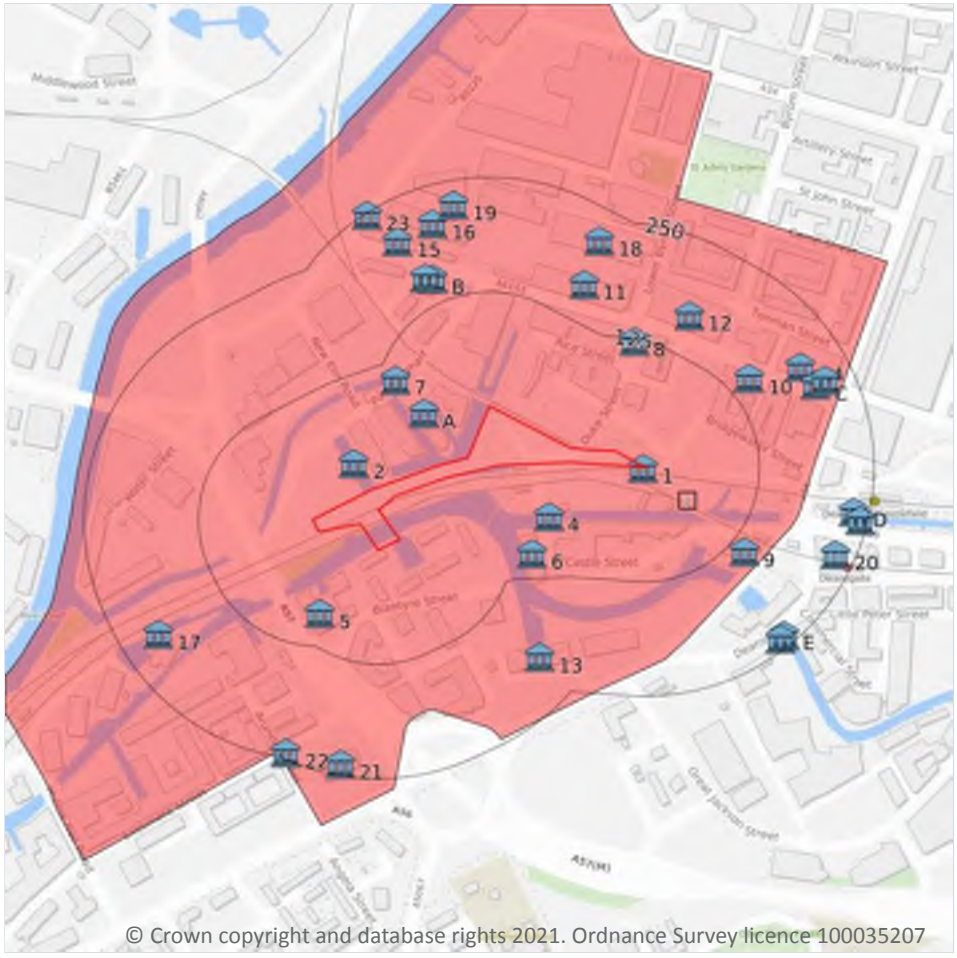
10.18 SSSI Units

Records within 2000m	0

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

This data is sourced from Natural England and Natural Resources Wales.

11 Visual and cultural designations



Site Outline

Search buffers in metres (m)

Listed buildings

Conservation areas

Conservation areas - no data

National Parks

Areas of Outstanding Natural Beauty

Registered parks and gardens

Scheduled Monuments

World Heritage Sites

11.1 World Heritage Sites

Records within 250m	0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m	0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m	0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m	31

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.

Features are displayed on the Visual and cultural designations map on **page 135**

ID	Location	Name	Grade	Reference Number	Listed date
1	1m S	Castlefield Railway Viaduct From G-Mex To Dawson Street, Deansgate, Manchester, M3	II	1292315	14/02/1988
2	34m NW	Bridgewater Canal Basin At Potato Wharf, Deansgate, Manchester, M3	II	1246959	06/06/1994
4	59m S	Rochdale Canal Lock Number 92 And Castle Street Bridge, Deansgate, Manchester, M3	II	1270858	20/06/1988
A	59m N	The Giants Basin, Deansgate, Manchester, M3	II	1247068	06/06/1994

ID	Location	Name	Grade	Reference Number	Listed date
5	89m S	Former Canal Flour Mills, Deansgate, Manchester, M15	II	1200858	09/11/1992
6	98m S	Merchants Warehouse, Deansgate, Manchester, M3	II	1197778	20/06/1988
7	104m N	Pair Of Culvert Arches Over River Medlock And Associated Overflow Channel, Deansgate, Manchester, M3	II	1283003	06/06/1994
8	122m N	Former St Matthews Sunday School, Deansgate, Manchester, M3	II	1200806	03/10/1974
9	142m SE	Former Congregational Chapel, Deansgate, Manchester, M3	II	1292311	20/06/1988
10	149m NE	29-41, Liverpool Road, Deansgate, Manchester, M3	II	1219402	06/06/1994
B	152m NW	123, Liverpool Road, Deansgate, Manchester, M3	II	1200804	06/06/1994
B	156m NW	Former Commercial Hotel, Deansgate, Manchester, M3	II	1219418	06/06/1994
11	165m NE	Power Hall Of Museum Of Science And Industry, Deansgate, Manchester, M3	II	1291458	06/06/1994
12	168m NE	Museum Of Science And Industry, Air And Space Museum, Deansgate, Manchester, M3	II	1200807	17/05/1974
13	200m SE	Middle Warehouse, At Former Castle Field Goods Yard, Deansgate, Manchester, M15	II	1208653	05/06/1990
14	202m NE	Former Market Hall, Deansgate, Manchester, M3	II	1197915	17/05/1974
15	206m NW	Former Liverpool Road Railway Station Station Masters House, Deansgate, Manchester,FORMER LIVERPOOL ROAD RAILWAY STATION	I	1291477	18/12/1963
C	206m NE	K6 Telephone Kiosk Beside South West Corner Of Number 330 Deansgate, Deansgate, Manchester, M3	II	1219441	29/10/1987
16	208m N	Old Warehouse To North Of Former Liverpool Road Railway Station, Deansgate, Manchester, M60	I	1282991	08/05/1973
17	208m SW	Hulme Lock Branch Canal, Hulme, Manchester, M15	II	1208196	06/06/1994
18	216m NE	Manchester Museum Of Science And Industry, Former Lower Byrom Street Warehouse, Deansgate, Manchester, M3	II	1283016	06/06/1994
C	219m NE	Castlefield Information Centre, Deansgate, Manchester, M3	II	1200853	17/05/1974
19	223m N	Colonnaded Railway Viaduct At Former Liverpool Road Goods Depot, Deansgate, Manchester, M60	II	1200805	06/06/1994
20	229m SE	Deansgate Station, Deansgate, Manchester, M3	II	1376146	20/08/1998
D	233m E	Rochdale Canal Lock Keepers Cottage At Lock Number 91, Next To Gaythorn Tunnel, Deansgate, Manchester, M3	II	1247597	29/01/1986
21	238m S	Church Of St George, Hulme, Manchester, M15	II*	1208640	03/10/1974

ID	Location	Name	Grade	Reference Number	Listed date
E	238m SE	Boundary Stone On Knott Mill Bridge, Deansgate, Manchester, M15	II	1282975	06/06/1994
E	239m SE	Floodgate On East Side Of Knott Mill Bridge, Deansgate, Manchester, M15	II	1210156	06/06/1994
D	242m E	Rochdale Canal Lock Number 91 At East End Of Gaythorn Tunnel, Deansgate, Manchester, M3	II	1247483	29/01/1986
22	244m SW	Churchyard Walls, Gate Piers And Gates At Church Of St George, Hulme, Manchester, M15	II	1197789	03/10/1974
23	248m NW	Railway Viaduct Linking Bridge Over Irwell To Liverpool Road Station, Deansgate, Manchester, M3	II	1254726	20/06/1988

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.5 Conservation Areas

Records within 250m **1**

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

Features are displayed on the Visual and cultural designations map on **page 135**

ID	Location	Name	District	Date of designation
A	**On site**	**Castlefield**	**Manchester**	**13/10/1979**

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m **1**

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

Features are displayed on the Visual and cultural designations map on **page 135**

ID	Location	Ancient monument name	Reference number
3	56m SE	Remains of eastern wall of the Roman fort	1001953

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.7 Registered Parks and Gardens

Records within 250m	**0**

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

12 Agricultural designations



Site Outline

Search buffers in metres (m)

- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m	1

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on **page 140**

ID	Location	Classification	Description
1	**On site**	**Urban**	-

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m	0

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m	0

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m	0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m	0

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

This data is sourced from Natural England.

13 Habitat designations



Site Outline

Search buffers in metres (m)

Priority Habitat Inventory
Open Mosaic Habitat
Limestone Pavement Orders

Habitat Networks

Primary Habitat
Restorable Habitat
Associated Habitats
Habitat Restoration-Creation
Network Enhancement Zone 1
Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m	0

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m	0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m	1

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

Features are displayed on the Habitat designations map on **page 142**

ID	Location	Site reference	Identification confidence	Primary source	Secondary source	Tertiary source
1	183m NW	NLUD Ref: 421501367	Low	National Land Use Database - Previously Developed Land	UK Perspectives Aerial Photography	-

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m	0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.

14 Geology 1:10,000 scale - Availability



Site Outline

Search buffers in metres (m)

Full coverage

Partial coverage

No coverage

14.1 10k Availability

Records within 500m	1

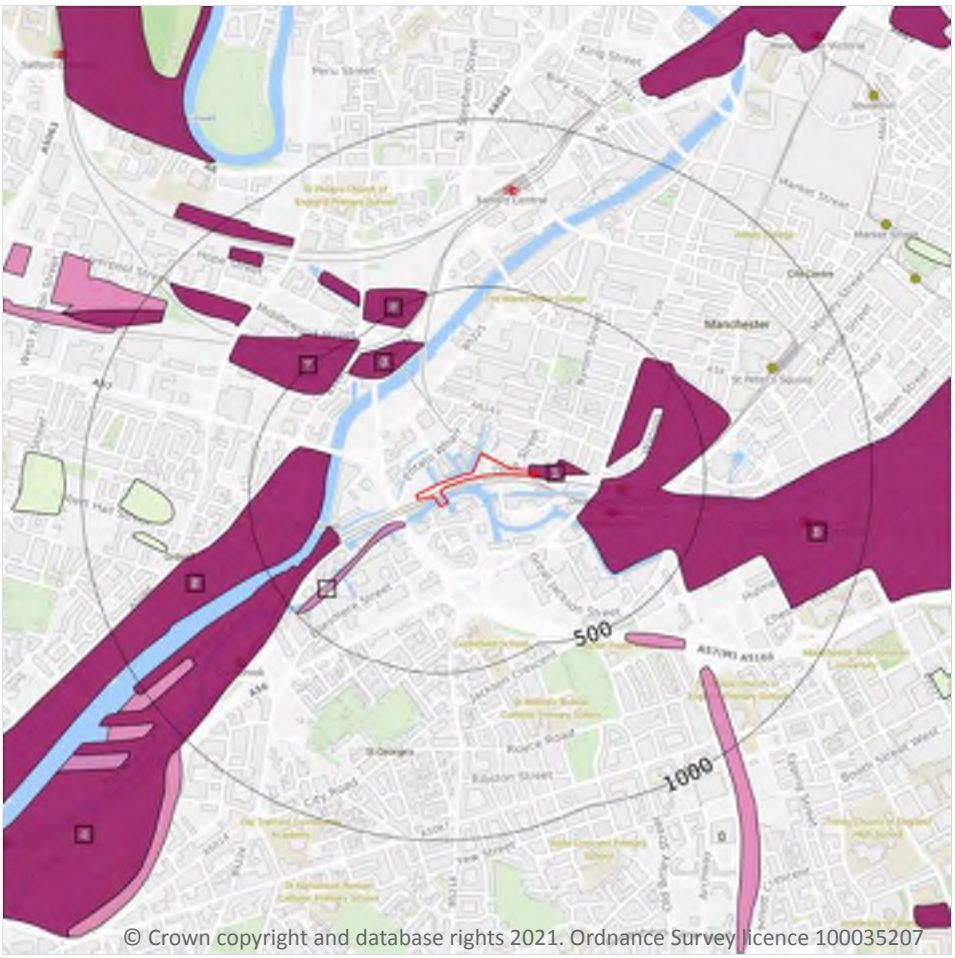
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 144**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**No coverage**	**SJ89NW**

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Artificial and made ground



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Site Outline

Search buffers in metres (m)

- Reclaimed ground
- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m **8**

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

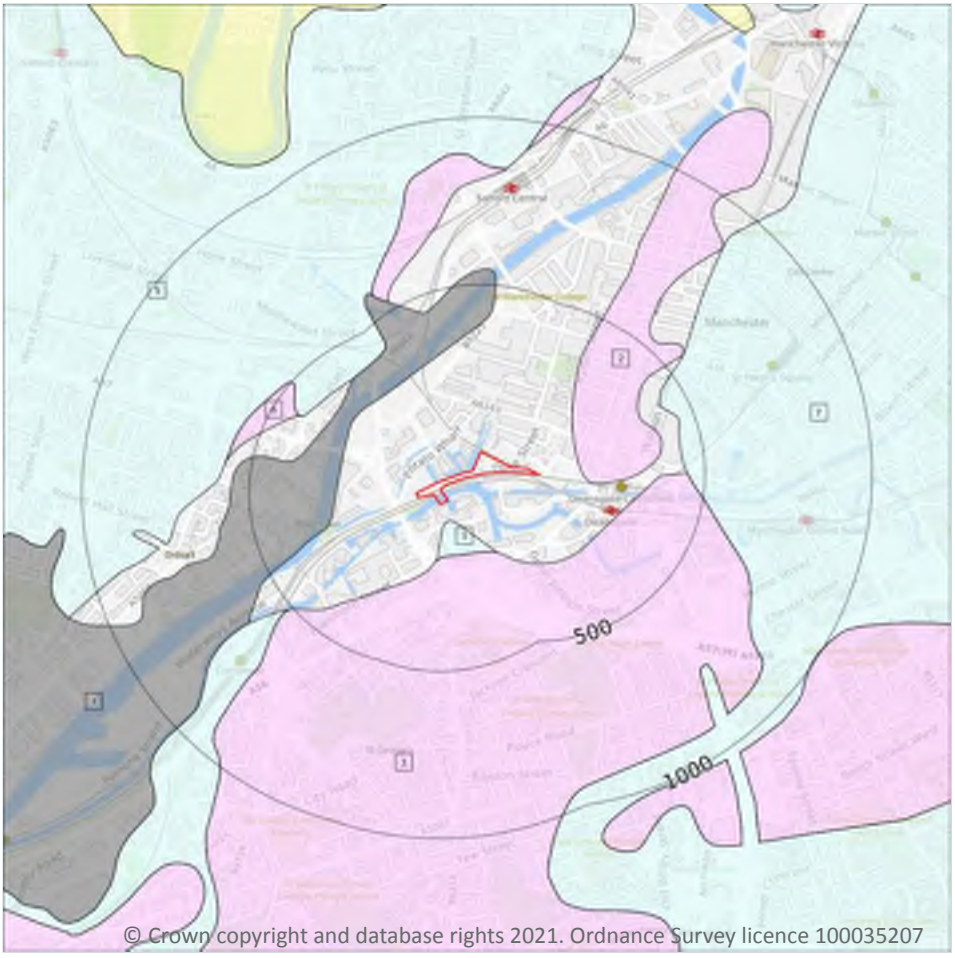
Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 145**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**MGR-ARTDP**	**Made Ground (Undivided)**	**Artificial Deposit**
2	83m SW	WGR-VOID	Worked Ground (Undivided)	Void
3	168m SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	264m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

ID	Location	LEX Code	Description	Rock description
5	274m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
6	356m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
7	411m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
8	443m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m **7**

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on **page 147**

ID	Location	LEX Code	Description	Rock description
1	56m S	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
2	125m E	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
3	157m S	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel

ID	Location	LEX Code	Description	Rock description
4	237m W	ALV-XSWCV	Alluvium - Sand With Clay And Gravel	Sand With Clay And Gravel [unlithified Deposits Coding Scheme - Extended]
5	389m NW	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
6	418m NW	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
7	419m NE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m	**0**

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m **2**

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 149**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**CPB-SDST**	**Chester Pebble Beds Formation - Sandstone**	**Early Triassic Epoch**
3	438m NE	MM-MDST	Manchester Marls Formation - Mudstone	Late Permian Epoch [Obsolete name]

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m	**2**

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 149**

ID	Location	Category	Description
2	122m E	LANDFORM	Buried channel or valley margin
4	485m NE	FAULT	Normal fault, inferred; crossmarks on downthrow side

This data is sourced from the British Geological Survey.

15 Geology 1:50,000 scale - Availability



Site Outline

Search buffers in metres (m)

Geological map tile

15.1 50k Availability

Records within 500m	1

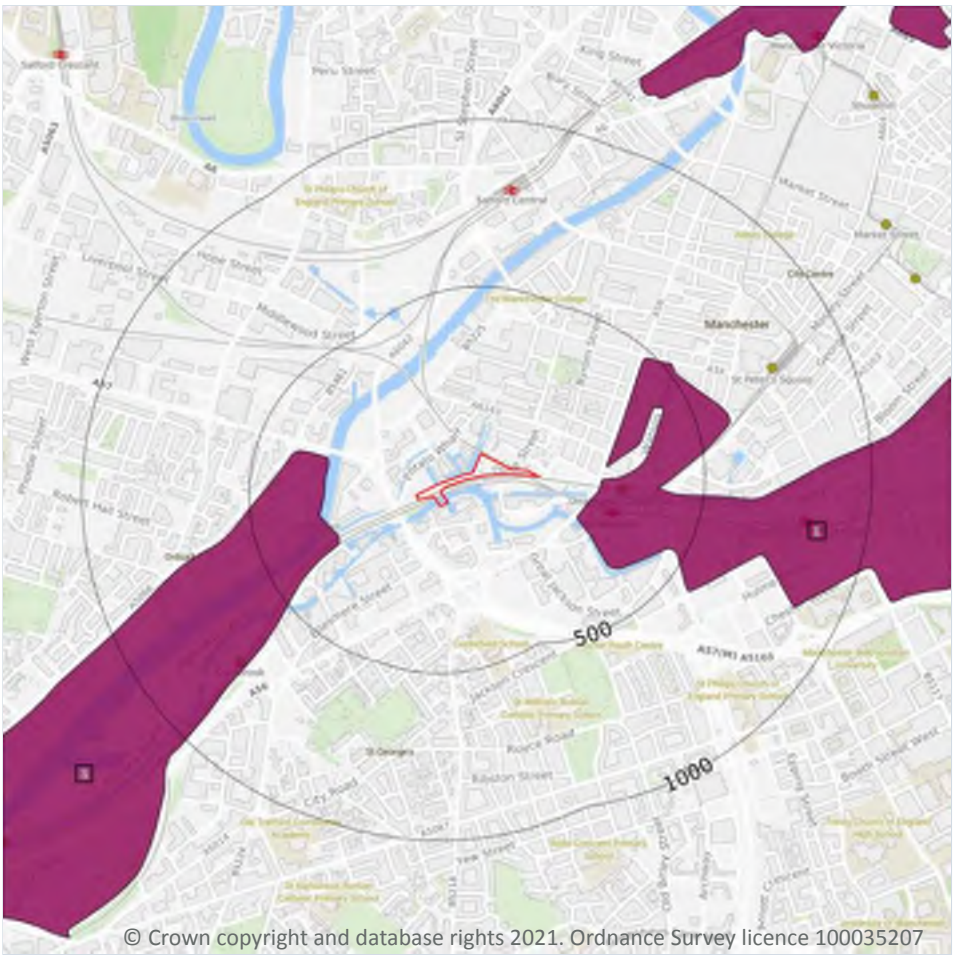
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 151**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**No coverage**	**Full**	**Full**	**No coverage**	**EW085_manchester_v4**

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Artificial and made ground



Site Outline

Search buffers in metres (m)

- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

15.2 Artificial and made ground (50k)

Records within 500m	2

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 152**

ID	Location	LEX Code	Description	Rock description
1	168m SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	263m SW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

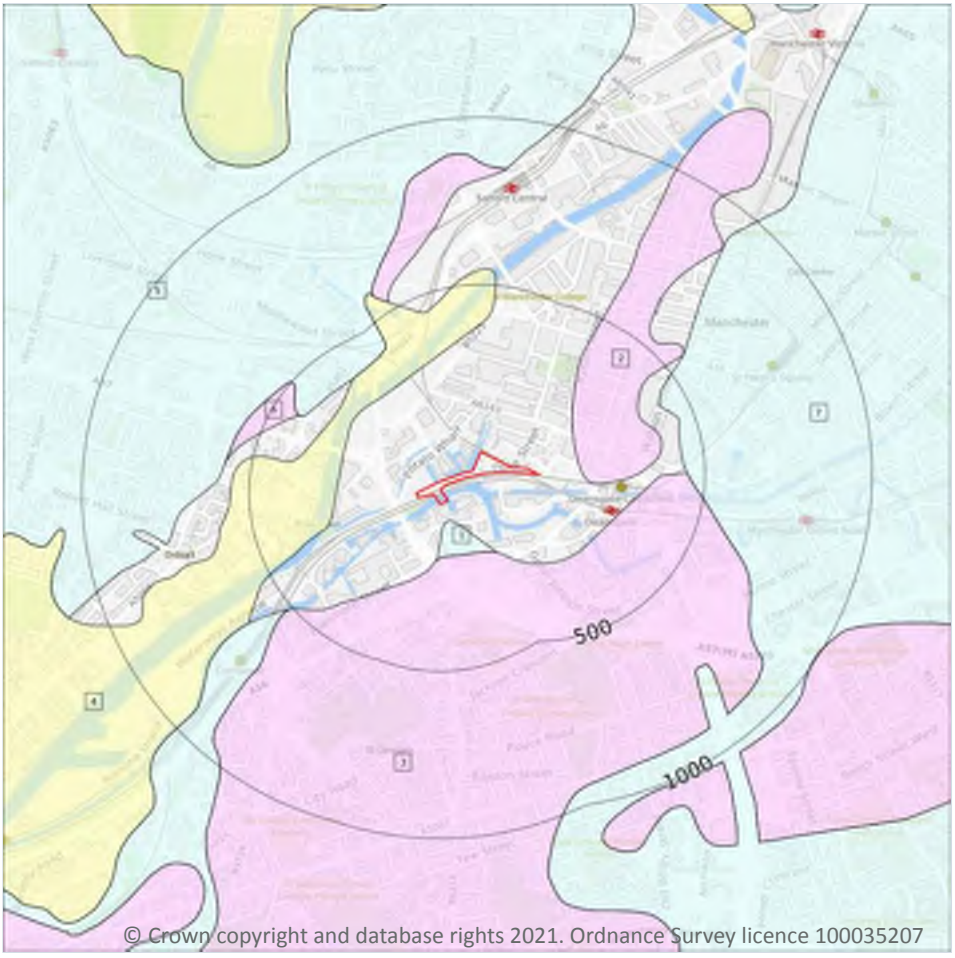
15.3 Artificial ground permeability (50k)

Records within 50m	0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



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Site Outline

Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m **7**

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 154**

ID	Location	LEX Code	Description	Rock description
1	56m S	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
2	126m E	GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
3	157m S	GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
4	236m W	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

ID	Location	LEX Code	Description	Rock description
5	389m NW	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
6	418m NW	GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
7	419m NE	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

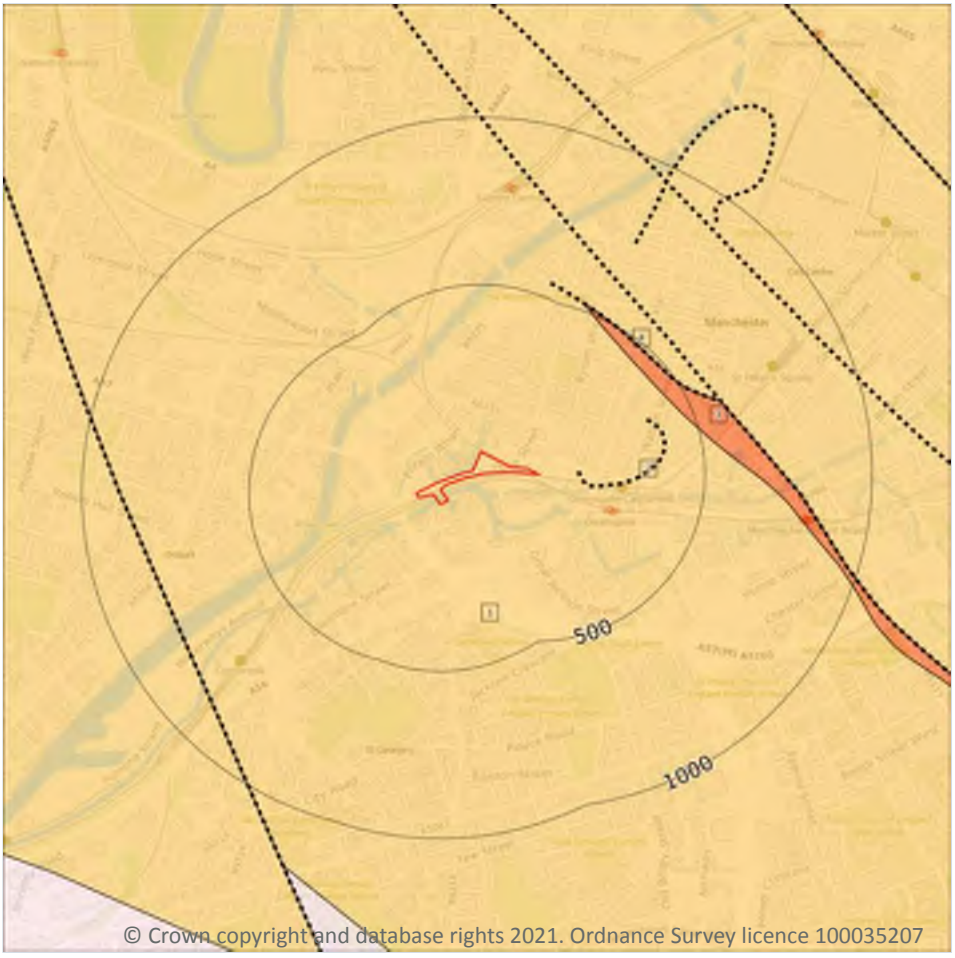
15.7 Landslip permeability (50k)

Records within 50m	0

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m **2**

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 156**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**CHES-SDST**	**CHESTER FORMATION - SANDSTONE**	**OLENEKIAN**
3	438m NE	MM-MDST	MANCHESTER MARLS FORMATION - MUDSTONE	-

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	1

A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Mixed**	**High**	**Moderate**

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	2

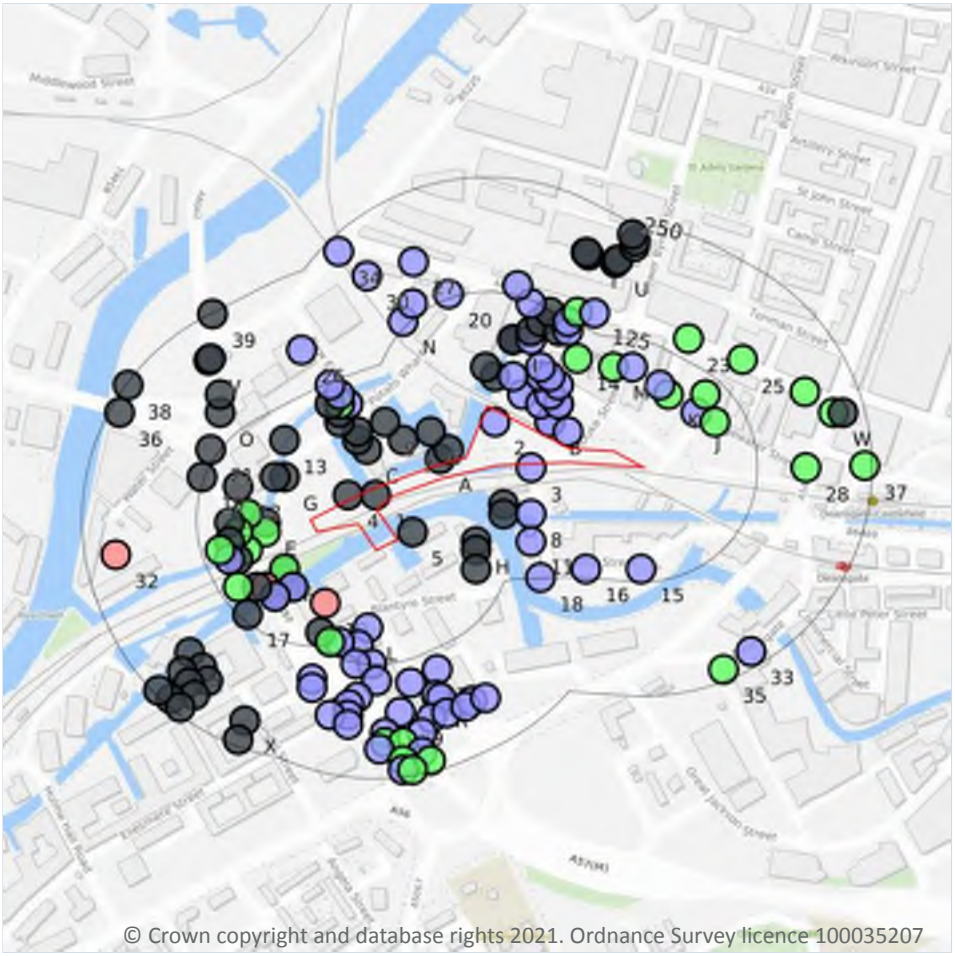
Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 156**

ID	Location	Category	Description
2	122m E	LANDFORM	Approximate margin of buried (superficial deposit-filled) channel or valley
4	485m NE	FAULT	Fault, inferred

This data is sourced from the British Geological Survey.

16 Boreholes



Site Outline

Search buffers in metres (m)

Confidential

0 - 10m

10 - 30m

30m+

Unknown

16.1 BGS Boreholes

Records within 250m	178

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on **page 158**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	**On site**	**382930 397590**	**POTATO WHARF CASTLEFIELD**	**-**	**Y**	**N/A**
2	**On site**	**383060 397670**	**CASTLEFIELD ROAD AND SEWERS G**	**3.6**	**N**	**1045613**
3	4m S	383100 397620	CASTLEFIELD ROAD AND SEWERS F	3.0	N	1045612

ID	Location	Grid reference	Name	Length	Confidential	Web link
4	5m NW	382900 397590	POTATO WHARF MANCHESTER TP 5	-	Y	N/A
A	6m N	383000 397630	VISIONS CENTRE, CASTLEFIELD 3	-	Y	N/A
A	13m N	383010 397640	VISIONS CENTRE, CASTLEFIELD 2	-	Y	N/A
B	16m NE	383120 397670	DUKE PLACE ARCHAEOLOGICAL EXCAVATION D	6.15	N	1045661
B	16m NE	383120 397670	DUKE PLACE ARCHAEOLOGICAL EXCAVATION E	6.1	N	1045662
B	16m NE	383140 397660	DUKE PLACE ARCHAEOLOGICAL EXCAVATION F	3.2	N	1045663
5	18m NE	382970 397550	POTATO WHARF CASTLEFIELD 1	-	Y	N/A
B	28m NE	383090 397700	DUKE PLACE 5	2.05	N	1045657
B	29m NE	383110 397690	CASTLEFIELD ROAD AND SEWERS K	6.0	N	1045616
B	33m N	383060 397720	SWING BRIDGES, STAFFS WHARFE 1	-	Y	N/A
6	38m N	382990 397660	VISIONS CENTRE, CASTLEFIELD 1	-	Y	N/A
B	38m NE	383130 397690	DUKE PLACE ARCHAEOLOGICAL EXCAVATION A	6.05	N	1045658
B	38m NE	383130 397690	DUKE PLACE ARCHAEOLOGICAL EXCAVATION B	6.2	N	1045659
7	38m N	382960 397650	POTATO WHARF MANCHESTER TP 3	-	Y	N/A
B	42m NE	383080 397720	CASTLEFIELD ROAD AND SEWERS H	2.5	N	1045614
B	42m NE	383120 397700	DUKE PLACE ARCHAEOLOGICAL EXCAVATION C	6.25	N	1045660
C	42m N	382920 397640	POTATO WHARF MANCHESTER TP 2	-	Y	N/A
B	43m N	383050 397730	SWING BRIDGES, STAFFS WHARFE 2	-	Y	N/A
D	43m S	383070 397580	MERCHANTS BRIDGE CASTLEFIELD 1	-	Y	N/A
E	49m W	382810 397560	CHESTER ROAD PHASE 2 10	-	Y	N/A
E	51m W	382810 397550	MANCUNIAN WAY - REGENT ROAD DS6	20.35	N	1043492
D	53m S	383070 397570	MERCHANTS BRIDGE CASTLEFIELD 2	-	Y	N/A
F	54m SW	382830 397510	CHESTER ROAD PHASE 2 9	-	Y	N/A
F	54m SW	382830 397510	MANCUNIAN WAY - REGENT ROAD ES3	19.0	N	1043495
8	54m S	383100 397570	CASTLEFIELD ROAD AND SEWERS E	2.5	N	1045611
C	55m N	382910 397650	POTATO WHARF MANCHESTER R1	-	Y	N/A
G	55m NW	382830 397610	POTATO WHARF PWR1	-	Y	N/A
B	55m NE	383110 397720	DUKE PLACE 1	6.9	N	1045653

ID	Location	Grid reference	Name	Length	Confidential	Web link
B	56m NE	383130 397710	DUKE PLACE 3	7.65	N	1045655
B	60m NE	383120 397720	DUKE PLACE 2	6.4	N	1045654
G	61m NW	382820 397610	CHESTER ROAD PHASE 2 11A	-	Y	N/A
9	64m N	382940 397670	POTATO WHARF MANCHESTER TP 1	-	Y	N/A
B	64m NE	383110 397730	DUKE PLACE 4	3.85	N	1045656
C	64m N	382910 397660	POTATO WHARF MANCHESTER R2	-	Y	N/A
F	66m SW	382840 397490	CHESTER ROAD PHASE 2 TP2	-	Y	N/A
F	66m SW	382840 397490	MANCUNIAN WAY - REGENT ROAD ES6	4.0	N	1043497
E	69m W	382790 397570	CHESTER ROAD PHASE 2 13	-	Y	N/A
E	69m W	382790 397570	MANCUNIAN WAY - REGENT ROAD DS3	10.5	N	1043490
H	75m S	383040 397540	MERCHANTS BRIDGE CASTLEFIELD 3	-	Y	N/A
E	77m SW	382790 397530	MANCHESTER 7 SALFORD INNER RELIEF ROAD REGENT ROAD TO CHESTER ROAD DS5	12.2	N	1044174
I	78m N	383080 397760	PRO DEV STAFF'DSHIRE WHARF TP4	-	Y	N/A
I	78m N	383080 397760	PRO DEV STAFF'DSHIRE WHARF BH2	-	Y	N/A
I	78m N	383080 397760	PRO DEV STAFF'DSHIRE WHARF BH1	-	Y	N/A
I	78m N	383080 397760	PRO DEV STAFF'DSHIRE WHARF TP1	-	Y	N/A
I	78m N	383080 397760	PRO DEV STAFF'DSHIRE WHARF BH3	-	Y	N/A
I	78m N	383080 397760	PRO DEV STAFF'DSHIRE WHARF TP3	-	Y	N/A
I	78m N	383080 397760	PRO DEV STAFF'DSHIRE WHARF TP2	-	Y	N/A
10	79m S	382875 397472	SUTCLIFFE & SONS, FLOUR MILLS, EGERTON STREET	90.22	N	1042379
E	80m W	382780 397550	MANCUNIAN WAY - REGENT ROAD DS2	19.03	N	1043489
C	81m NW	382890 397670	POTATO WHARF NEW ELM STREET 1	-	Y	N/A
F	82m SW	382810 397490	MANCUNIAN WAY - REGENT ROAD ES2	30.6	N	1043494
J	83m NE	383280 397680	BRIDGEWATER STREET / RICE STREET MAIN DRAINAGE B	5.0	N	1045623
K	83m NE	383250 397700	BRIDGEWATER STREET / RICE STREET MAIN DRAINAGE 3	12.5	N	1045619
F	84m SW	382820 397480	CHESTER ROAD PHASE 2 TP1	-	Y	N/A

ID	Location	Grid reference	Name	Length	Confidential	Web link
F	84m SW	382820 397480	MANCUNIAN WAY - REGENT ROAD ES5	4.2	N	1043496
11	84m S	383100 397540	CASTLEFIELD ROAD AND SEWERS D	3.45	N	1045610
H	85m S	383040 397530	MERCHANTS BRIDGE CASTLEFIELD 4	-	Y	N/A
L	86m S	382921 397445	BLANTYRE STREET MANCHESTER 1	4.5	N	15624877
I	86m NE	383100 397760	CASTLEFIELD ROAD AND SEWERS J	5.05	N	1045615
K	87m NE	383240 397710	BRIDGEWATER STREET / RICE STREET MAIN DRAINAGE C	4.7	N	1045624
12	87m NW	382780 397600	CHESTER ROAD PHASE 2 14	-	Y	N/A
E	89m W	382770 397560	CHESTER ROAD PHASE 2 4	-	Y	N/A
F	89m SW	382800 397490	CHESTER ROAD PHASE 2 7	-	Y	N/A
C	90m N	382890 397680	POTATO WHARF NEW ELM STREET 3	-	Y	N/A
E	90m SW	382780 397520	CHESTER ROAD PHASE 2 6	-	Y	N/A
13	90m NW	382830 397650	POTATO WHARF PWR2	-	Y	N/A
14	92m NE	383150 397740	BRIDGEWATER STREET / RICE STREET MAIN DRAINAGE 5	12.0	N	1045621
H	92m E	383040 397510	MERCHANTS BRIDGE CASTLEFIELD 5	-	Y	N/A
M	92m N	383190 397730	BRIDGEWATER STREET / RICE STREET MAIN DRAINAGE 4	12.0	N	1045620
E	92m W	382770 397540	CHESTER ROAD PHASE 2 5	-	Y	N/A
J	92m NE	383300 397670	BRIDGEWATER STREET / RICE STREET MAIN DRAINAGE 2	12.0	N	1045618
M	94m N	383210 397730	BRIDGEWATER STREET / RICE STREET MAIN DRAINAGE F	4.3	N	1045625
I	95m NE	383100 397770	CASTLEFIELD CENTRE MANCHESTER TP 3	-	Y	N/A
C	96m N	382900 397690	MANCHESTER AND SALFORD INNER RELIEF ROAD TP42	4.0	N	1045789
E	99m SW	382770 397520	MANCUNIAN WAY - REGENT ROAD DS4	10.0	N	1043491
C	99m N	382890 397690	MANCHESTER AND SALFORD INNER RELIEF ROAD NER2	21.1	N	1045787
C	103m NW	382880 397690	POTATO WHARF NEW ELM STREET 2	-	Y	N/A
J	104m NE	383290 397700	CITY CENTRE - PHASE 2 30	11.12	N	1043528
E	105m W	382760 397530	MANCUNIAN WAY - REGENT ROAD DS1	18.0	N	1043488

ID	Location	Grid reference	Name	Length	Confidential	Web link
F	105m SW	382780 397490	MANCUNIAN WAY - REGENT ROAD ES1	17.66	N	1043493
L	105m S	382911 397427	BLANTYRE STREET MANCHESTER 2	4.5	N	15624884
L	108m S	382890 397430	MANCUNIAN WAY - REGENT ROAD U2	5.5	N	1043498
I	109m NE	383110 397780	CASTLEFIELD CENTRE MANCHESTER 1	-	Y	N/A
L	109m SW	382870 397440	CHESTER ROAD PHASE 2 8	-	Y	N/A
C	109m N	382890 397700	MANCHESTER AND SALFORD INNER RELIEF ROAD NER1	8.0	N	1045786
I	109m NE	383130 397770	CASTLEFIELD CENTRE MANCHESTER TP 2	-	Y	N/A
15	111m S	383220 397510	CASTLEFIELD ROAD AND SEWERS A	5.5	N	1045607
L	112m SW	382880 397430	LOWER MEDLOCK C/1 SITE 0181 301/301A	14.52	N	1043409
I	114m NE	383140 397770	NEW OFFICES LIVERPOOL ROAD MANCHESTER 2	5.5	N	1044465
16	115m S	383160 397510	CASTLEFIELD ROAD AND SEWERS B	4.0	N	1045608
17	118m SW	382790 397460	MANCHESTER 7 SALFORD INNER RELIEF ROAD REGENT ROAD TO CHESTER ROAD ES4	-	Y	N/A
C	122m N	382880 397710	MANCHESTER AND SALFORD INNER RELIEF ROAD TP41	2.0	N	1045788
I	122m NE	383120 397790	CASTLEFIELD CENTRE MANCHESTER TP 1	-	Y	N/A
I	122m NE	383100 397800	NEW OFFICES LIVERPOOL ROAD MANCHESTER 1	9.0	N	1044464
I	123m NE	383140 397780	BRIDGEWATER STREET / RICE STREET MAIN DRAINAGE H	5.2	N	1045626
L	125m S	382926 397406	BLANTYRE STREET MANCHESTER 4	4.5	N	15624889
18	125m S	383110 397500	CASTLEFIELD ROAD AND SEWERS C	5.0	N	1045609
L	127m S	382908 397406	BLANTYRE STREET MANCHESTER 3	4.0	N	15624886
19	128m W	382740 397610	CHESTER ROAD PHASE 2 3	-	Y	N/A
20	130m N	383010 397810	MANCHESTER, WOOLHAM PLACE 6	4.9	N	1042838
N	131m NW	382960 397780	MANCHESTER, WOOLHAM PLACE 5	4.7	N	1042837
21	133m NW	382750 397640	CHESTER ROAD PHASE 2 2	-	Y	N/A
I	136m N	383085 397819	MANCHESTER CORP. E.SEWER	7.01	N	1042237
I	136m NE	383150 397790	BRIDGEWATER STREET / RICE STREET MAIN DRAINAGE 6	12.7	N	1045622
N	139m NW	382970 397800	MANCHESTER, WOOLHAM PLACE 4	3.7	N	1042836

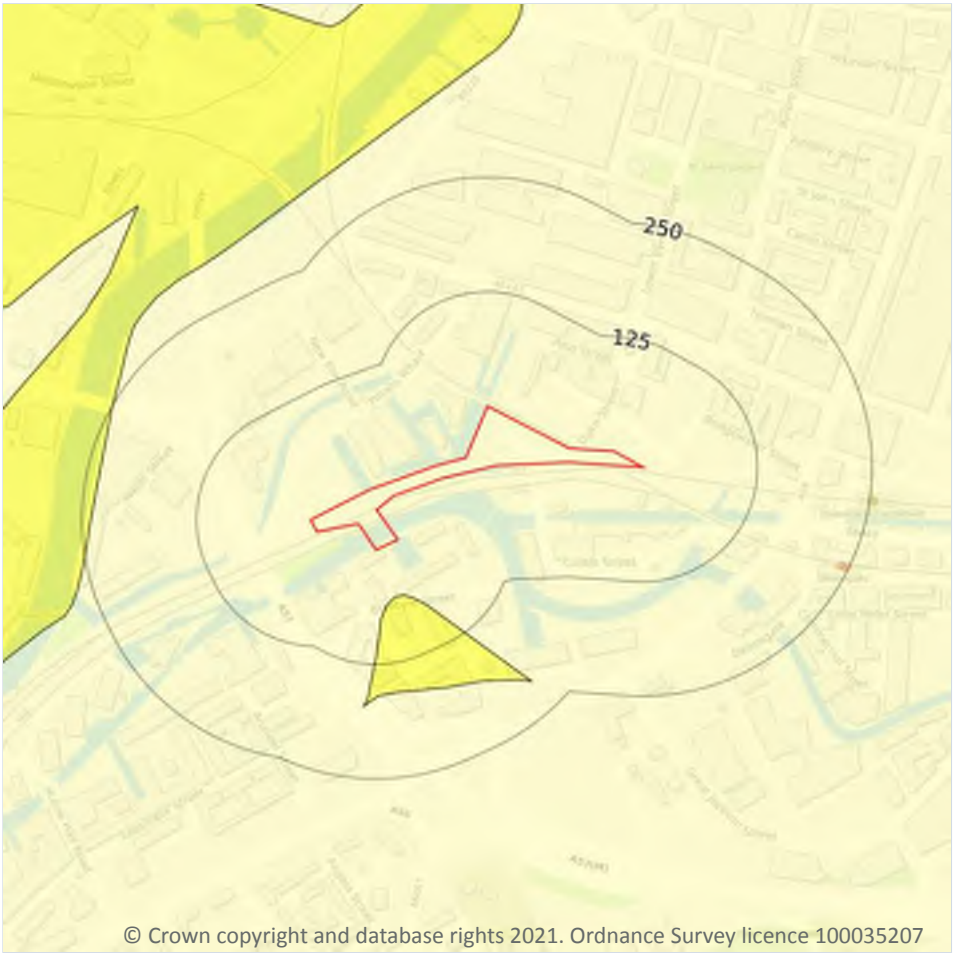
ID	Location	Grid reference	Name	Length	Confidential	Web link
L	144m S	382931 397387	BLANTYRE STREET MANCHESTER 5	5.0	N	15624891
I	144m NE	383169 397789	MANCHESTER CORP. E.SEWER	9.45	N	1042236
22	147m SE	382997 397400	BLANTYRE STREET MANCHESTER 7	4.7	N	15624894
23	147m NE	383271 397761	MANCHESTER CORP. E.SEWER	11.28	N	1042235
24	150m S	382968 397385	BLANTYRE STREET MANCHESTER 6	5.0	N	15624893
O	153m NW	382760 397680	CHESTER ROAD PHASE 2 1	-	Y	N/A
P	157m SW	382860 397390	MANCUNIAN WAY - REGENTS ROAD U1	3.5	N	1043803
25	159m NE	383330 397738	MANCHESTER CORP. E.SEWER	12.19	N	1042234
Q	162m S	382910 397370	MANCUNIAN WAY - REGENTS ROAD U4	4.6	N	1043805
P	166m SW	382860 397380	MANCHESTER AND SALFORD INNER RELIEF ROAD TP28	0.43	N	1045760
O	169m NW	382760 397700	CHESTER ROAD PHASE 2 TP7/7A	-	Y	N/A
26	170m NW	382849 397749	MANCHESTER CORP. MARKET COLD AIR STORES, ELM ST	-2.0	N	1042441
Q	171m S	382901 397362	MANCHESTER CORP. C.SEWER	8.53	N	1042279
R	172m SE	382996 397372	BLANTYRE STREET MANCHESTER 9	5.0	N	15624899
R	176m SE	383001 397369	BLANTYRE STREET MANCHESTER 14	8.1	N	15624908
27	177m NW	382971 397845	MANCHESTER CORP. E.SEWER	7.92	N	1042238
28	178m E	383400 397620	BRIDGEWATER STREET / RICE STREET MAIN DRAINAGE 1	12.0	N	1045617
29	180m S	382957 397353	BLANTYRE STREET MANCHESTER 8	5.0	N	15624897
Q	183m S	382900 397350	MANCUNIAN WAY - REGENTS ROAD U3	5.6	N	1043804
Q	187m S	382880 397350	MANCHESTER AND SALFORD INNER RELIEF ROAD TP13	1.5	N	1045752
S	192m SW	382727 397418	TIMBER WHARF MANCHESTER TP 4	-	Y	N/A
Q	193m S	382900 397340	MANCHESTER AND SALFORD INNER RELIEF ROAD TP14	1.5	N	1045753
R	193m SE	383035 397366	BLANTYRE STREET MANCHESTER 13	8.0	N	15624906
R	193m S	382991 397347	BLANTYRE STREET MANCHESTER 10	5.0	N	15624902
30	194m NW	382920 397830	MANCHESTER, WOOLHAM PLACE 1	3.1	N	1042835
R	194m SE	383007 397352	BLANTYRE STREET MANCHESTER 15	9.0	N	15624909

ID	Location	Grid reference	Name	Length	Confidential	Web link
S	194m SW	382740 397402	TIMBER WHARF MANCHESTER TP 3	-	Y	N/A
31	195m NE	383399 397703	MANCHESTER CORP. E.SEWER	12.5	N	1042233
R	197m SE	383028 397359	BLANTYRE STREET MANCHESTER 11	5.0	N	15624903
T	197m NE	383163 397852	Museum Of Science & Industry, Manchester WS3	-	Y	N/A
R	198m SE	383050 397369	BLANTYRE STREET MANCHESTER 12	5.0	N	15624905
T	198m NE	383160 397855	Museum Of Science & Industry, Manchester WS4	-	Y	N/A
T	199m NE	383161 397855	Museum Of Science & Industry, Manchester WS4A	-	Y	N/A
R	201m S	382940 397330	MANCHESTER AND SALFORD INNER RELIEF ROAD TP29	1.5	N	1045761
S	203m SW	382746 397387	TIMBER WHARF MANCHESTER TP 1	-	Y	N/A
U	203m NE	383192 397844	Museum Of Science & Industry, Manchester WS2	-	Y	N/A
V	206m NW	382748 397737	INNER RELIEF ROUTE 1	-	Y	N/A
R	207m S	382980 397330	MANCHESTER AND SALFORD INNER RELIEF ROAD TP30	1.5	N	1045762
U	207m NE	383194 397847	Museum Of Science & Industry, Manchester WS1	-	Y	N/A
U	207m NE	383195 397847	Museum Of Science & Industry, Manchester TP1	-	Y	N/A
V	208m NW	382750 397740	MSIRR REGENT ROAD - GORE STREET 1	-	Y	N/A
R	211m S	382940 397320	MANCUNIAN WAY - REGENTS ROAD U5	15.05	N	1043806
S	211m SW	382719 397398	TIMBER WHARF MANCHESTER TP 5	-	Y	N/A
R	213m S	382960 397320	MANCUNIAN WAY - REGENTS ROAD U8	16.2	N	1043809
W	216m E	383430 397680	CITY CENTRE - PHASE 2 29	12.5	N	1043527
S	216m SW	382726 397385	TIMBER WHARF MANCHESTER TP 6	-	Y	N/A
32	217m W	382646 397525	RYLANDS & SONS DACCA MILLS, WATER STREET	102.57	N	1042378
R	218m S	382934 397313	MANCHESTER CORP. C.SEWER	9.45	N	1042278
X	221m S	382787 397344	BRITTANIA BASIN MANCHESTER 1	-	Y	N/A
S	223m SW	382732 397372	TIMBER WHARF MANCHESTER TP 2	-	Y	N/A
U	225m N	383212 397862	Museum Of Science & Industry, Manchester WS6	-	Y	N/A
W	226m E	383440 397680	FESTIVAL MARKETPLACE TP 3/1	-	Y	N/A
R	226m S	382980 397310	MANCUNIAN WAY - REGENTS ROAD U6	8.8	N	1043807

ID	Location	Grid reference	Name	Length	Confidential	Web link
U	231m N	383213 397868	Museum Of Science & Industry, Manchester WS5	-	Y	N/A
R	232m S	382960 397300	MANCHESTER 7 SALFORD INNER RELIEF ROAD REGENT ROAD TO CHESTER ROAD U23	10.2	N	1044173
33	233m SE	383340 397420	LOWER MEDLOCK UCSO'S CONTRACT 1 MAN 0276 304	9.1	N	1043415
34	235m NW	382889 397856	MANCHESTER CORP. E.SEWER	3.66	N	1042239
35	238m S	383310 397400	LOWER MEDLOCK UCSO'S CONTRACT 1 MAN 0276 303	10.59	N	1043414
U	238m N	383210 397875	Museum Of Science & Industry, Manchester TP2	-	Y	N/A
R	238m S	382990 397300	MANCUNIAN WAY - REGENTS ROAD U10	12.5	N	1043811
36	239m NW	382650 397680	REGENT BRIDGE 4	-	Y	N/A
37	242m E	383464 397622	MANCHESTER CORP. B.SEWER	12.5	N	1042262
R	242m S	382960 397290	MANCUNIAN WAY - REGENTS ROAD U7	9.8	N	1043808
S	242m SW	382706 397368	TIMBER WHARF MANCHESTER TP 8	-	Y	N/A
X	243m S	382780 397323	BRITTANIA BASIN PHASE 4 MANCHESTER TP 8	-	Y	N/A
R	244m S	382970 397290	MANCUNIAN WAY - REGENTS ROAD U9	19.6	N	1043810
S	244m SW	382716 397358	TIMBER WHARF MANCHESTER TP 7	-	Y	N/A
S	245m SW	382693 397377	TIMBER WHARF MANCHESTER TP 9	-	Y	N/A
38	247m NW	382660 397710	REGENT BRIDGE 3	-	Y	N/A
39	249m NW	382752 397788	INNER RELIEF ROUTE 2	-	Y	N/A

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



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Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.1 Shrink swell clays

Records within 50m	1

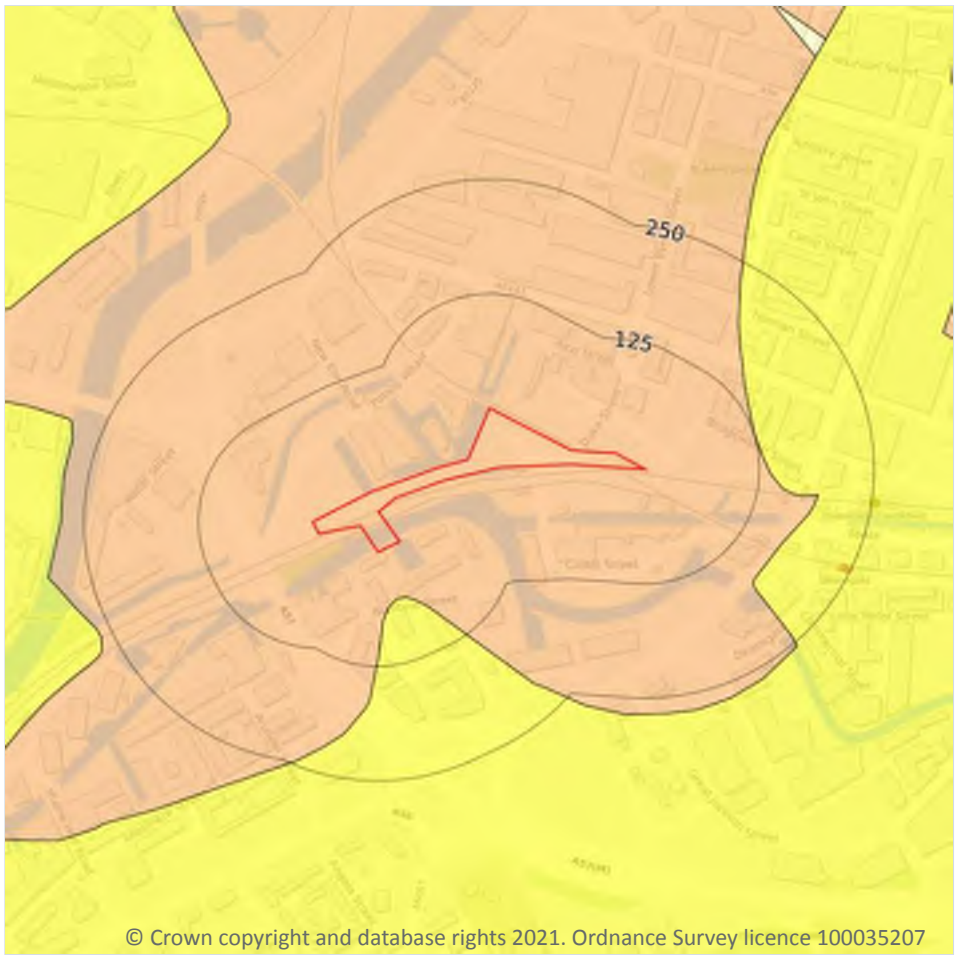
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 166**

Location	Hazard rating	Details
On site	**Negligible**	**Ground conditions predominantly non-plastic.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.2 Running sands

Records within 50m	1

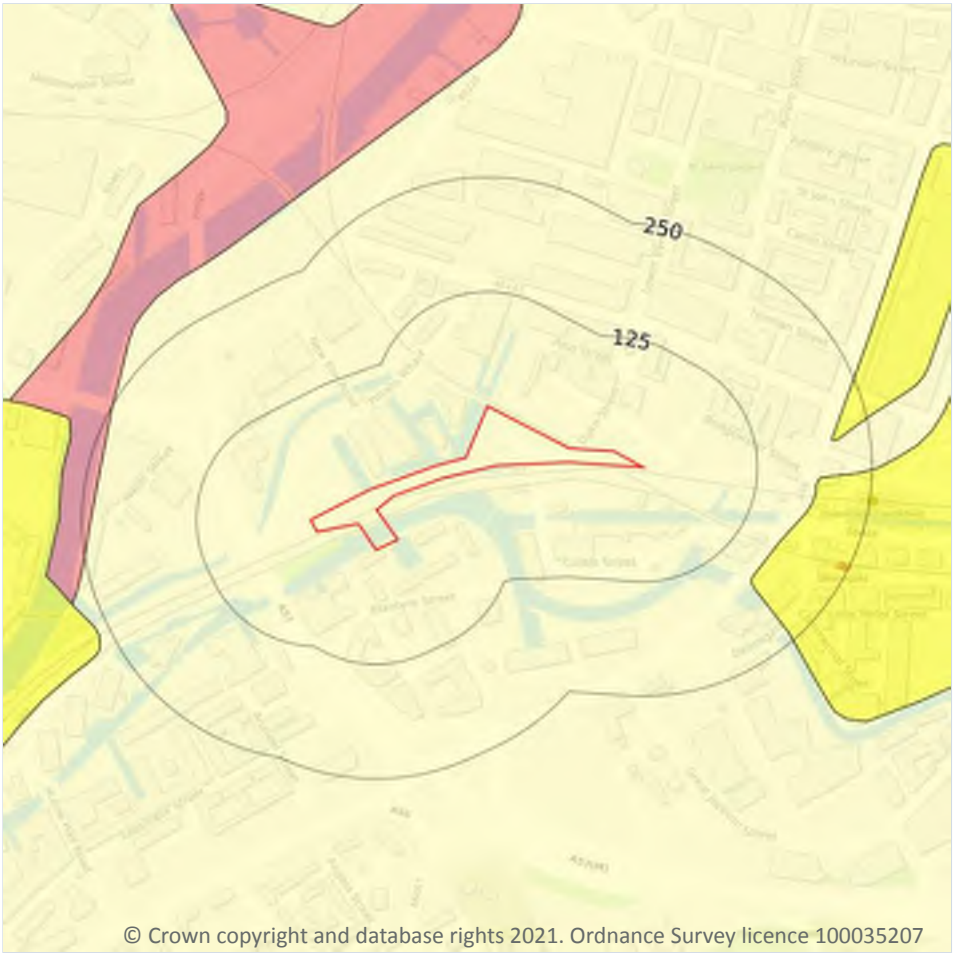
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 167**

Location	Hazard rating	Details
On site	**Low**	**Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



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Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.3 Compressible deposits

Records within 50m	1

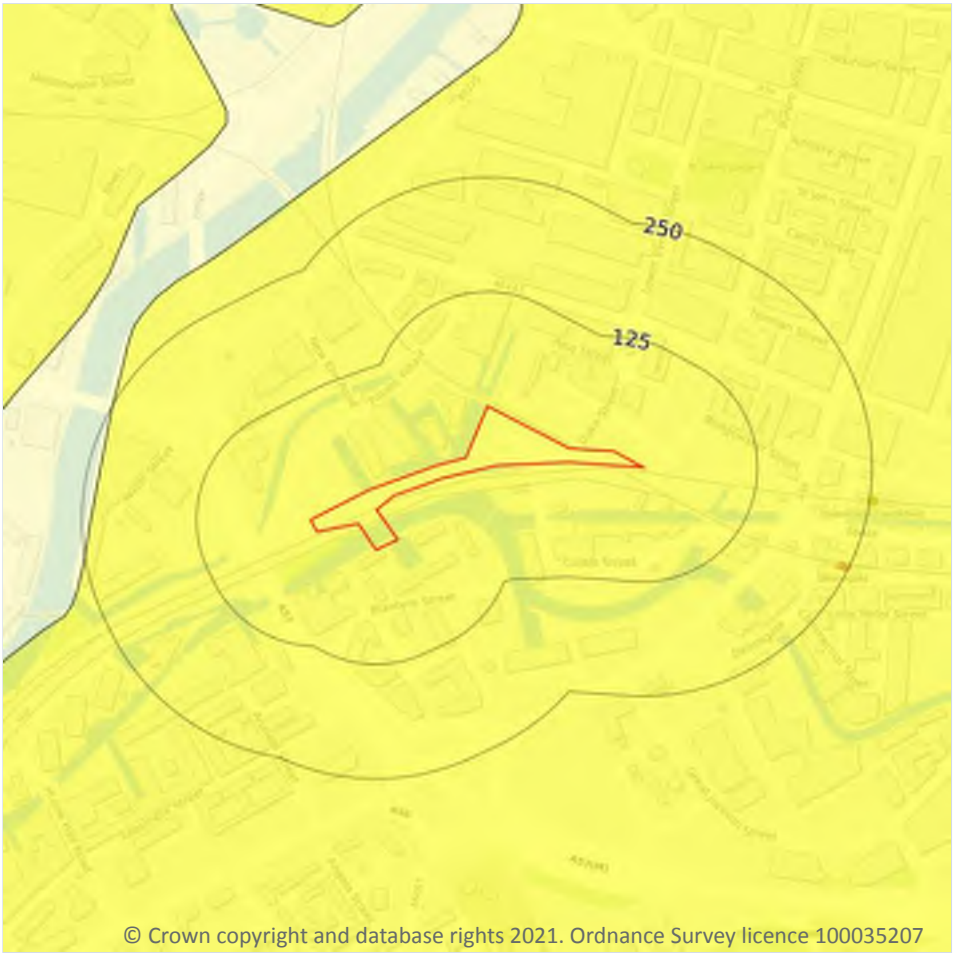
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 168**

Location	Hazard rating	Details
On site	**Negligible**	**Compressible strata are not thought to occur.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



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Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.4 Collapsible deposits

Records within 50m	**1**

The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 169**

Location	Hazard rating	Details
On site	**Very low**	**Deposits with potential to collapse when loaded and saturated are unlikely to be present.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.5 Landslides

Records within 50m	1

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 170**

Location	Hazard rating	Details
On site	**Very low**	**Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



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Site Outline

Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.6 Ground dissolution of soluble rocks

Records within 50m	1

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 171**

Location	Hazard rating	Details
On site	**Negligible**	**Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.**

This data is sourced from the British Geological Survey.

18 Mining, ground workings and natural cavities



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Site Outline

Search buffers in metres (m)

Natural cavities (Area)

Natural cavities (Point)

BritPits

Surface ground workings

Underground workings

Historical Mineral Planning Areas

Mining Cavities

Non Coal Mining

Sporadic underground mining of restricted extent possible

Localised small scale underground mining possible

Small scale mining possible

Underground mining known or likely within or in close proximity

Underground mining known within or in very close proximity

18.1 Natural cavities

Records within 500m	0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

18.2 BritPits

Records within 500m	0

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m	43

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining, ground workings and natural cavities map on **page 173**

ID	Location	Land Use	Year of mapping	Mapping scale
1	On site	Timber Wharf	1851	1:10560
2	On site	Unspecified Ground Workings	1851	1:10560
3	On site	Quay	1851	1:10560
A	On site	Canal	1971	1:10000
A	On site	Canal	1978	1:10000
A	On site	Canal	1985	1:10000
A	On site	Canal	1994	1:10000
A	On site	Canal	1938	1:10560
A	On site	Canal	1932	1:10560
A	On site	Canal	1916	1:10560
A	On site	Canal	1905	1:10560
A	On site	Canal	1923	1:10560
B	On site	Canal	1956	1:10560
B	On site	Canal	1988	1:10000
B	On site	Canal	1896	1:10560
C	On site	Unspecified Wharves	1938	1:10560
C	On site	Unspecified Wharves	1932	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
C	**On site**	**Unspecified Wharves**	**1916**	**1:10560**
C	**On site**	**Unspecified Wharves**	**1905**	**1:10560**
4	3m S	Water Body	1896	1:10560
5	41m SE	Gravel Pit	1851	1:10560
B	77m S	Unspecified Ground Workings	1851	1:10560
D	87m S	Quay	1938	1:10560
D	87m S	Quay	1932	1:10560
D	87m S	Quay	1916	1:10560
D	87m S	Quay	1905	1:10560
D	87m S	Quay	1923	1:10560
B	121m SE	Quay	1851	1:10560
6	151m W	Quay	1851	1:10560
B	153m S	Pond	1851	1:10560
A	164m S	Sand Pit	1851	1:10560
7	188m NW	Refuse Heap	1851	1:10560
E	213m NW	Quay	1851	1:10560
E	240m W	Canal	1971	1:10000
E	240m W	Canal	1956	1:10560
E	240m W	Canal	1988	1:10000
E	240m W	Canal	1978	1:10000
E	240m W	Canal	1985	1:10000
E	240m W	Canal	1994	1:10000
F	247m W	Canal	1938	1:10560
F	247m W	Canal	1932	1:10560
F	247m W	Canal	1916	1:10560
F	247m W	Canal	1905	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	0

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

This is data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	0

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m	1

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

Features are displayed on the Mining, ground workings and natural cavities map on **page 173**

ID	Location	Mine Address	Mineral	Data source	Publisher
-	679m W	Wodens Cave, Manchester, Greater Manchester	Firestone, Freestone, Hearthstone, Honestone, Ragstone, Sandstone, Scythestone, Silver Sand, Whetstone	'Underground Manchester - Secrets of the city revealed'	Willow Publishing

This data is sourced from Stantec UK Ltd.

18.8 JPB mining areas

Records on site	**1**

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

Location	Details
On site	**In addition to being located inside an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) have information such as mining plans and maps held within their archive of mining activities that have occurred within 1km of this property which may supplement this information. Please note, the plans held by JPB may also relate to non-mining records. Further details and a quote for services (if appropriate) can be obtained by emailing this report to enquiries.gs@jpb.co.uk.**

This data is sourced from Johnson Poole and Bloomer.

18.9 Coal mining

Records on site	**1**

Areas which could be affected by past, current or future coal mining.

Location	Details
On site	**The site is located within a coal mining area as defined by the Coal Authority. A Consultants Coal Mining Report is recommended to further assess coal mining issues at the site. This can be ordered directly through Groundsure or your preferred search provider.**

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0

The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

18.11 Gypsum areas

Records on site	0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

18.13 Clay mining

Records on site	0

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).

19 Radon



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Site Outline

Search buffers in metres (m)

- Greater than 30%
- Between 10% and 30%
- Between 5% and 10%
- Between 3% and 5%
- Between 1% and 3%
- Less than 1%

19.1 Radon

Records on site	1

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 179**

Location	Estimated properties affected	Radon Protection Measures required
On site	**Less than 1%**	**None****

This data is sourced from the British Geological Survey and Public Health England.

20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m **4**

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km^2. In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km^2; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	**25 - 35 mg/kg**	**No data**	**100 - 200 mg/kg**	**60 - 120 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 mg/kg**
On site	**25 - 35 mg/kg**	**No data**	**100 - 200 mg/kg**	**60 - 120 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**15 mg/kg**
5m NE	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
30m SW	25 - 35 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m **14**

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km^2).

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
On site	**17**	**3**	**52**	**36**	**0.3**	**52**	**31**	**22**	**6**
On site	**17**	**3**	**70**	**48**	**0.5**	**49**	**28**	**21**	**7**

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
On site	**18**	**3.2**	**46**	**32**	**0.3**	**60**	**23**	**24**	**5**
On site	**18**	**3.2**	**146**	**100**	**0.4**	**62**	**32**	**24**	**9**
On site	**19**	**3.3**	**81**	**56**	**0.5**	**57**	**29**	**24**	**8**
On site	**20**	**3.5**	**45**	**31**	**0.4**	**63**	**19**	**25**	**5**
7m S	18	3.2	81	56	0.4	57	30	23	8
12m N	19	3.3	89	61	0.4	58	29	24	8
14m W	20	3.5	213	146	0.4	66	34	26	11
21m E	17	3	76	52	0.5	52	30	23	7
22m SE	18	3.2	57	39	0.3	55	43	23	6
30m SW	18	3.2	50	34	0.3	60	29	24	6
33m NE	18	3.2	47	32	0.4	52	23	22	5
43m SW	17	3	110	76	0.4	61	30	23	8

This data is sourced from the British Geological Survey.

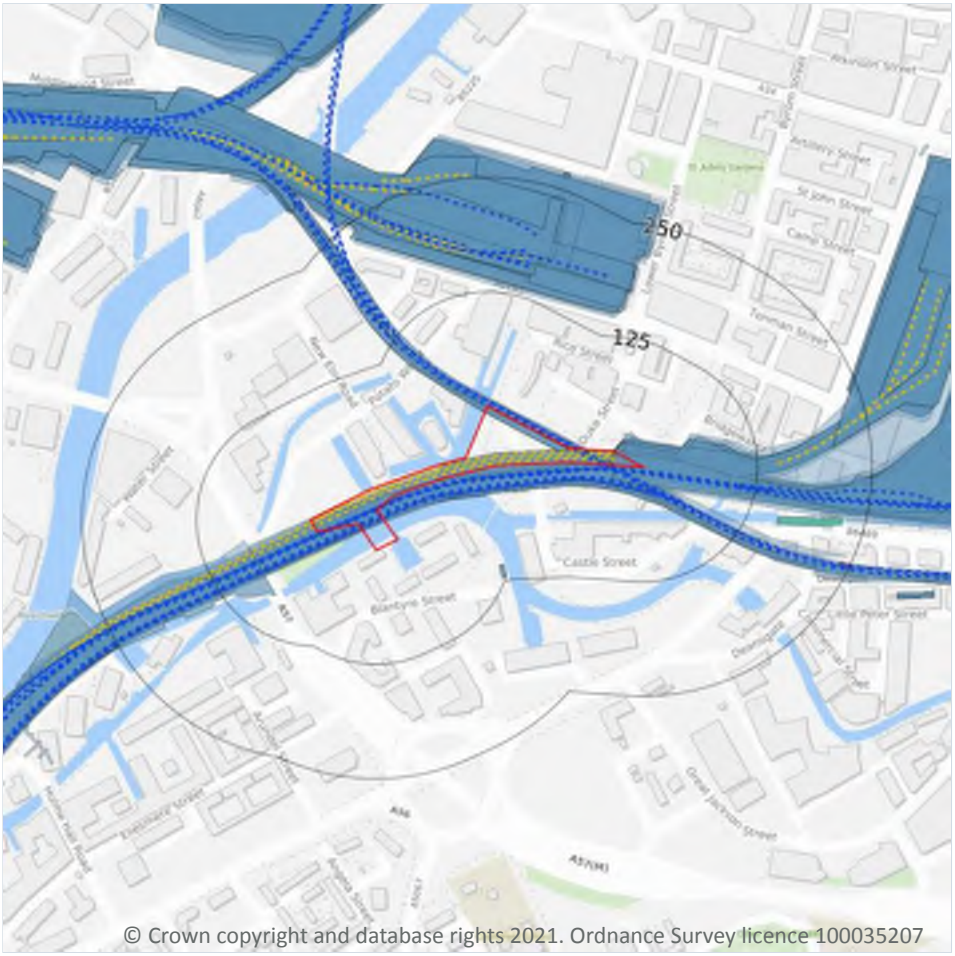
20.3 BGS Measured Urban Soil Chemistry

Records within 50m	**0**

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km^2.

This data is sourced from the British Geological Survey.

21 Railway infrastructure and projects



Site Outline

Search buffers in metres (m)

- Crossrail 1 Stations
- Crossrail 1 Route
- Crossrail 1 Worksites
- Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

21.1 Underground railways (London)

Records within 250m	0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m	0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m	1

Railway tunnels taken from contemporary Ordnance Survey mapping.

Features are displayed on the Railway infrastructure and projects map on **page 182**

Location	Type
On site	**Railway Tunnel**

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m	84

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

Features are displayed on the Railway infrastructure and projects map on **page 182**

Location	Land Use	Year of mapping	Mapping scale
On site	**Railway Sidings**	**1948**	**2500**
On site	**Railway Sidings**	**1893**	**2500**
On site	**Railway Sidings**	**1908**	**2500**
On site	**Railway Sidings**	**1922**	**2500**
On site	**Railway Sidings**	**1932**	**2500**
On site	**Railway Sidings**	**1979**	**2500**
On site	**Railway Sidings**	**1963**	**2500**
On site	**Railway**	**1922**	**-**
On site	**Railway**	**1932**	**-**
On site	**Railway**	**1889**	**-**
On site	**Railway**	**1908**	**-**
On site	**Railways**	**1893**	**-**
On site	**Railway Sidings**	**1938**	**10560**

Location	Land Use	Year of mapping	Mapping scale
On site	**Railway Sidings**	**1932**	**10560**
On site	**Railway Sidings**	**1916**	**10560**
On site	**Railway Sidings**	**1905**	**10560**
On site	**Railway Sidings**	**1923**	**10560**
3m NE	Railway Sidings	1956	10560
9m NE	Railway Sidings	1948	1250
10m NE	Railway Sidings	1963	2500
11m NE	Railway Sidings	1963	1250
11m NE	Railway Sidings	1979	1250
11m NE	Railway Sidings	1955	-
74m SW	Railways	1893	-
75m SW	Railways	1948	-
107m S	Railway Sidings	1948	1250
107m S	Railway Sidings	1963	1250
107m S	Railway Sidings	1979	1250
129m N	Railway Sidings	1923	10560
133m N	Railway Sidings	1896	10560
135m N	Railway Sidings	1938	10560
135m N	Railway Sidings	1932	10560
135m N	Railway Sidings	1916	10560
135m N	Railway Sidings	1905	10560
142m N	Railway Sidings	1891	500
142m N	Railway Sidings	1956	10560
144m NW	Railway	1889	-
147m N	Railway Sidings	1986	1250
148m N	Railway Sidings	1948	2500
148m N	Railway Sidings	1979	2500
148m N	Railway Sidings	1948	1250

Location	Land Use	Year of mapping	Mapping scale
148m N	Railway Sidings	1963	1250
148m N	Railway Sidings	1979	1250
148m N	Railway Sidings	1981	1250
148m N	Railway Sidings	1971	10000
148m N	Railway Sidings	1978	10000
148m N	Railway Sidings	1985	10000
149m N	Railway Sidings	1955	-
151m N	Railway Sidings	1988	10000
151m N	Railway Sidings	1994	10000
155m SE	Tunnel	1932	2500
157m E	Tunnel	1932	-
157m N	Railway Sidings	1990	1250
157m E	Tunnel	1986	1250
157m E	Tunnel	1990	1250
157m N	Railway Sidings	1995	1250
157m E	Tunnel	1948	1250
157m E	Tunnel	1963	1250
157m E	Tunnel	1979	1250
157m E	Tunnel	1981	1250
158m E	Tunnel	1995	1250
158m E	Tunnel	1994	1250
158m E	Tunnel	1955	-
158m E	Tunnel	1948	2500
158m E	Tunnel	1979	2500
158m E	Tunnel	1963	2500
158m N	Railway Sidings	1995	1250
158m N	Railway Sidings	1994	1250
162m N	Railway Sidings	1851	10560

Location	Land Use	Year of mapping	Mapping scale
177m N	Railway Sidings	1949	1250
177m N	Railway Sidings	1949	2500
177m N	Railway Sidings	1978	1250
187m E	Railway Sidings	1896	10560
190m E	Railway Sidings	1955	-
190m N	Railway Sidings	1995	1250
191m N	Railway Sidings	1995	1250
200m NW	Railway	1908	-
208m E	Railway Sidings	1971	10000
208m E	Railway Sidings	1978	10000
208m E	Railway Sidings	1985	10000
240m E	Railway Sidings	1955	-
241m E	Railway Sidings	1948	1250
242m E	Railway Sidings	1979	1250
242m E	Railway Sidings	1891	500

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m	0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m	11

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

Features are displayed on the Railway infrastructure and projects map on **page 182**

Location	Description
On site	**Abandoned**
On site	**Abandoned**
On site	**Abandoned**
148m E	Dismantled
164m N	Disused
174m N	Disused
181m N	Disused
237m E	Dismantled
238m NW	Disused
241m NW	Disused
250m N	Abandoned

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	**47**

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

Features are displayed on the Railway infrastructure and projects map on **page 182**

Location	Name	Type
On site		**rail**
On site		**rail**
On site		**rail**
On site		**rail**
On site		**light_rail**
On site		**light_rail**
On site		**rail**
On site	**Not given**	**Multi Track**
On site	**Not given**	**Multi Track**
On site	**Not given**	**Multi Track**

Location	Name	Type
4m S	Not given	Multi Track
4m S	Not given	Multi Track
4m S	Not given	Multi Track
4m S	Not given	Multi Track
8m S	Not given	Multi Track
20m S	Not given	Multi Track
25m SW	Not given	Multi Track
27m S		rail
27m S		rail
29m SE	Not given	Multi Track
41m SE	Not given	Multi Track
49m SE	Not given	Multi Track
55m SE		rail
55m SE		rail
107m E	Metrolink	light_rail
107m E		light_rail
107m E	Metrolink	light_rail
107m E		light_rail
133m NW	Ordsall Chord	rail
133m NW		rail
141m NW	Ordsall Chord	rail
141m NW		rail
142m E		light_rail
159m N	Liverpool & Manchester Railway	Preserved
163m N	Liverpool & Manchester Railway	Preserved
167m N	Liverpool & Manchester Railway	Preserved
168m N	Not given	Preserved
170m N	Liverpool & Manchester Railway	Preserved

Location	Name	Type
177m N	Liverpool & Manchester Railway	Preserved
184m N	Liverpool & Manchester Railway	Preserved
195m N	Liverpool & Manchester Railway	Preserved
200m NW	Not given	Multi Track
225m NW	Ordsall Chord	rail
227m NW	Ordsall Chord	rail
233m SW	Not given	Multi Track
240m NW	Liverpool & Manchester Railway	Preserved
242m NW	Liverpool & Manchester Railway	Preserved

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m	**0**

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m	**0**

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m	**0**

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

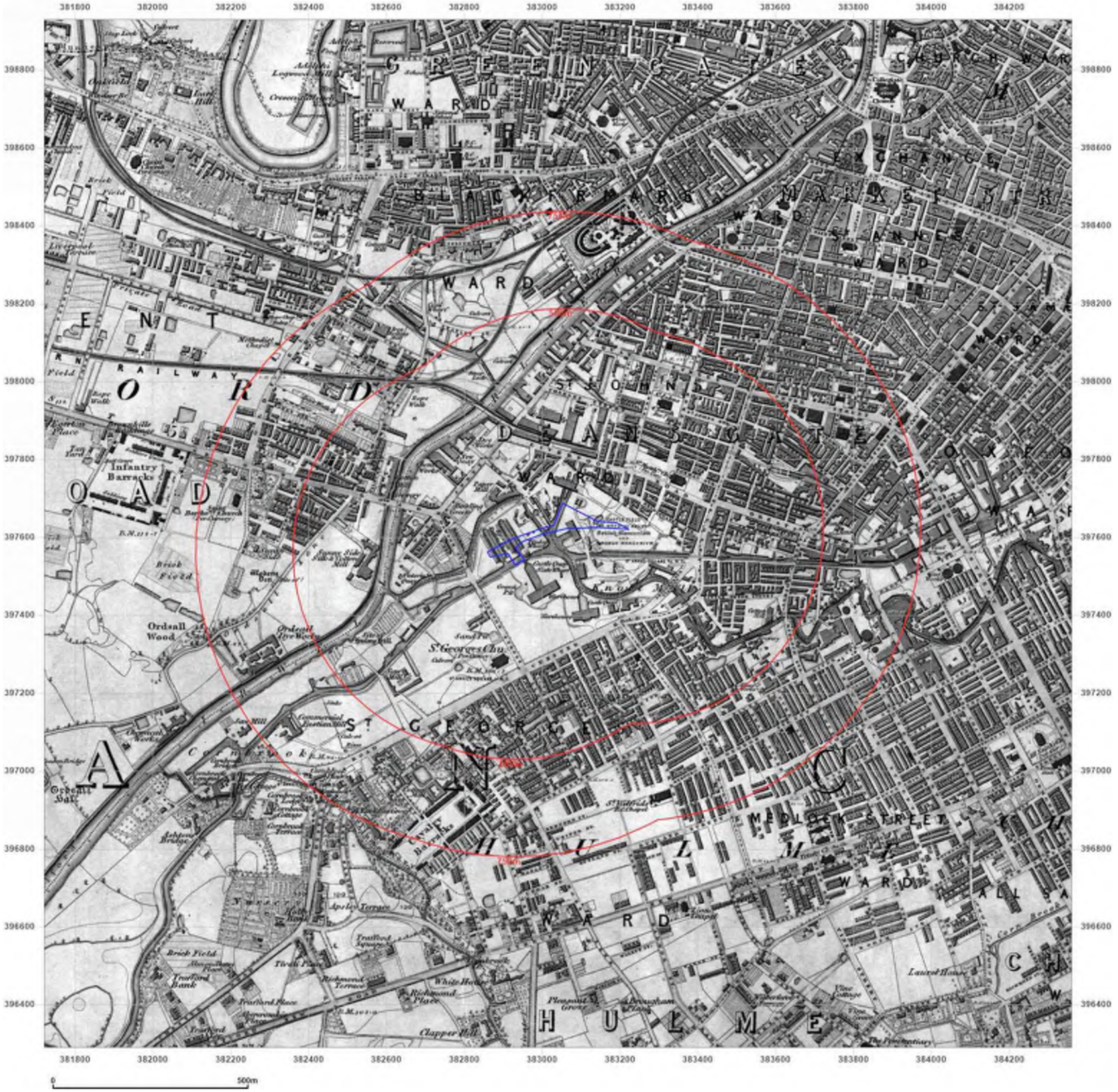
This data is sourced from HS2 ltd.

Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see https://www.groundsure.com/sources-reference.

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Report Ref: GS-7712230
Grid Ref: 383040, 397609

Map Name: County Series

Map date: **1848**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1845
Revised N/A
Edition 1848
Copyright N/A
Levelled N/A

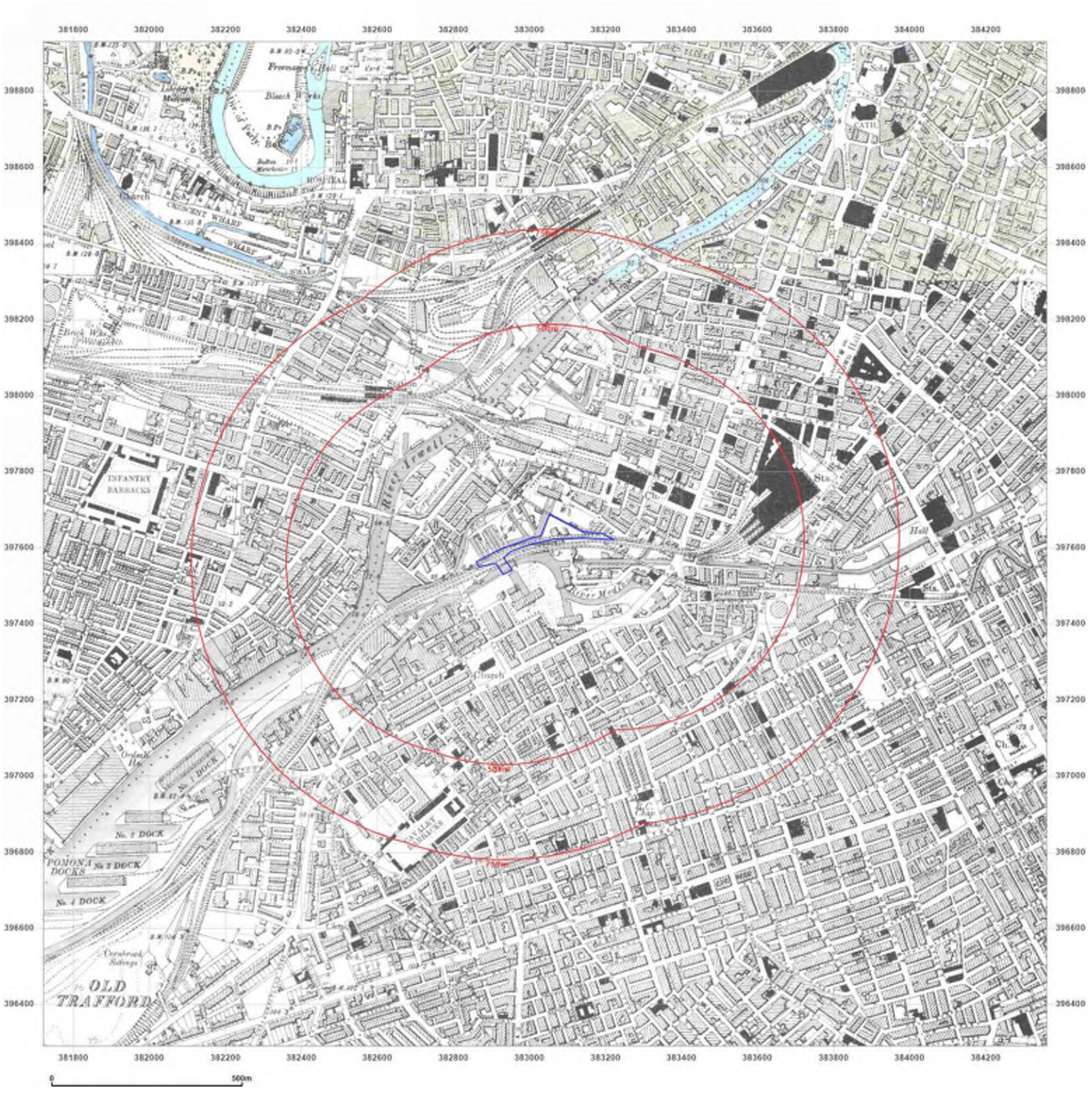
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Grid Ref: 383040, 397609

Map Name: County Series

Map date: **1894-1896**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1889
Revised 1889
Edition 1894
Copyright N/A
Levelled N/A

Surveyed 1894
Revised 1896
Edition 1896
Copyright N/A
Levelled N/A

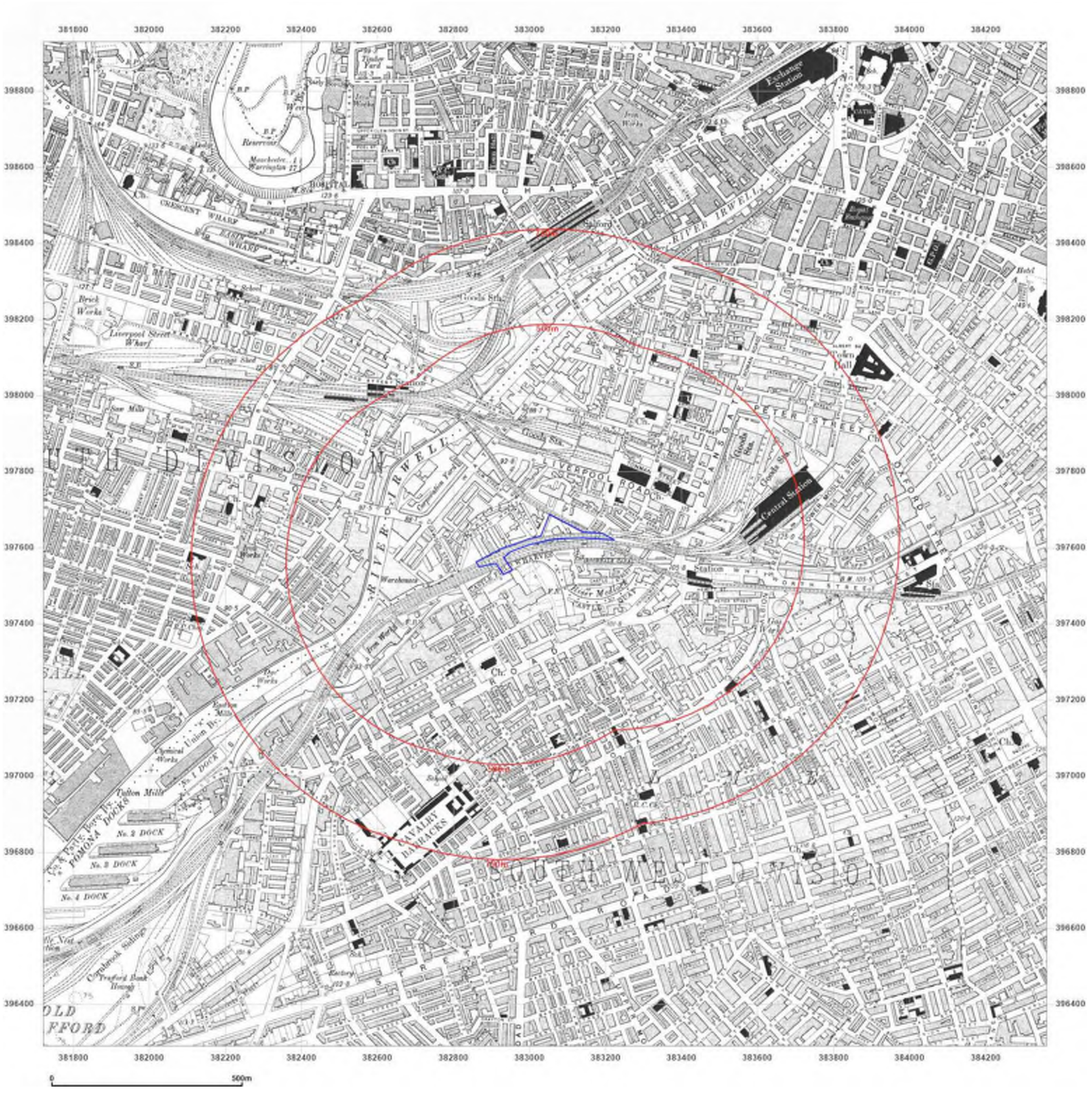
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Map Name: County Series

Map date: **1905-1906**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1844
Revised 1906
Edition 1906
Copyright N/A
Levelled N/A

Surveyed 1844
Revised 1905
Edition 1905
Copyright N/A
Levelled N/A

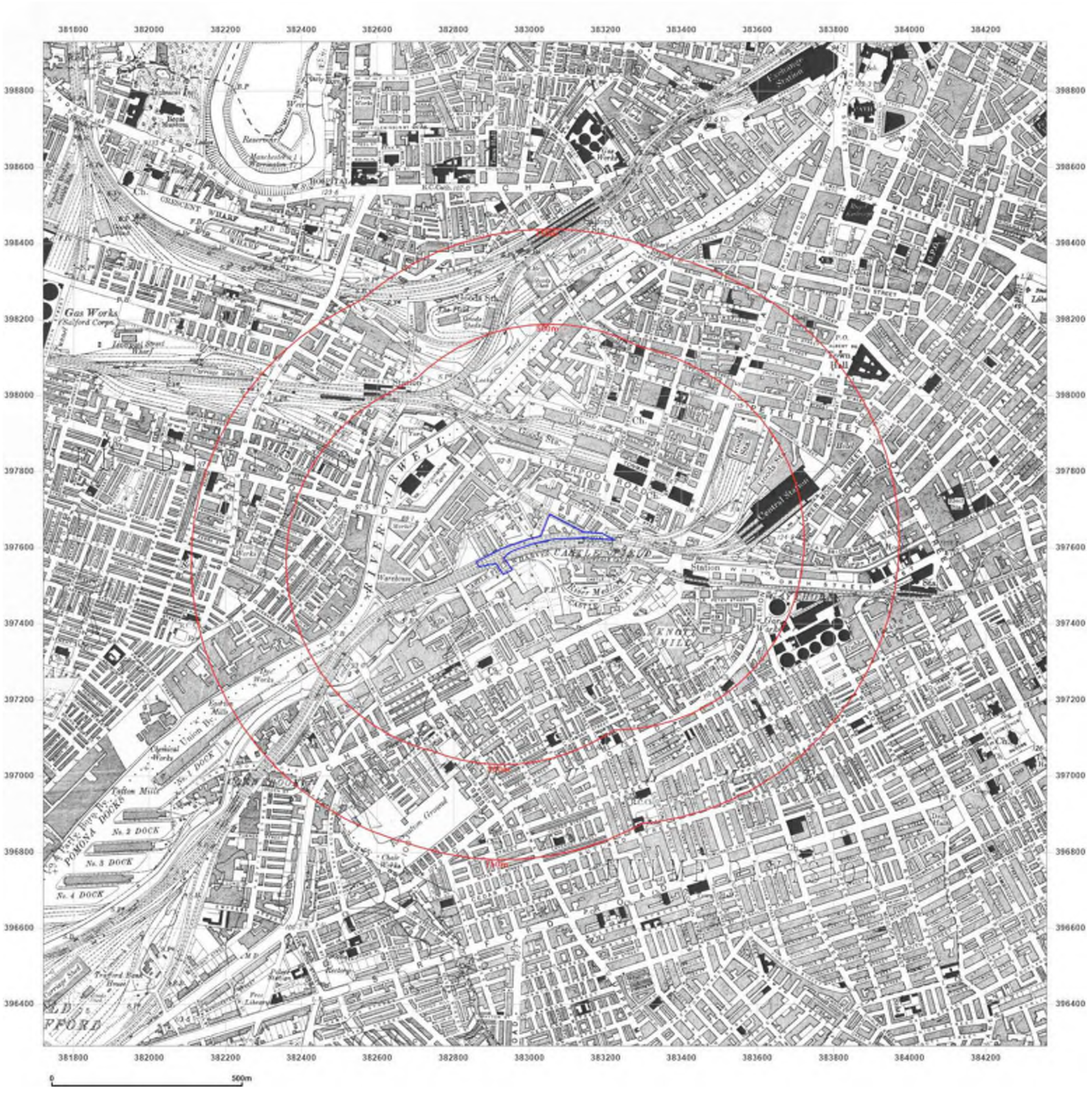
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Report Ref: GS-7712230
Grid Ref: 383040, 397609

Map Name: County Series

Map date: **1923**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1844
Revised 1916
Edition 1923
Copyright N/A
Levelled 1915

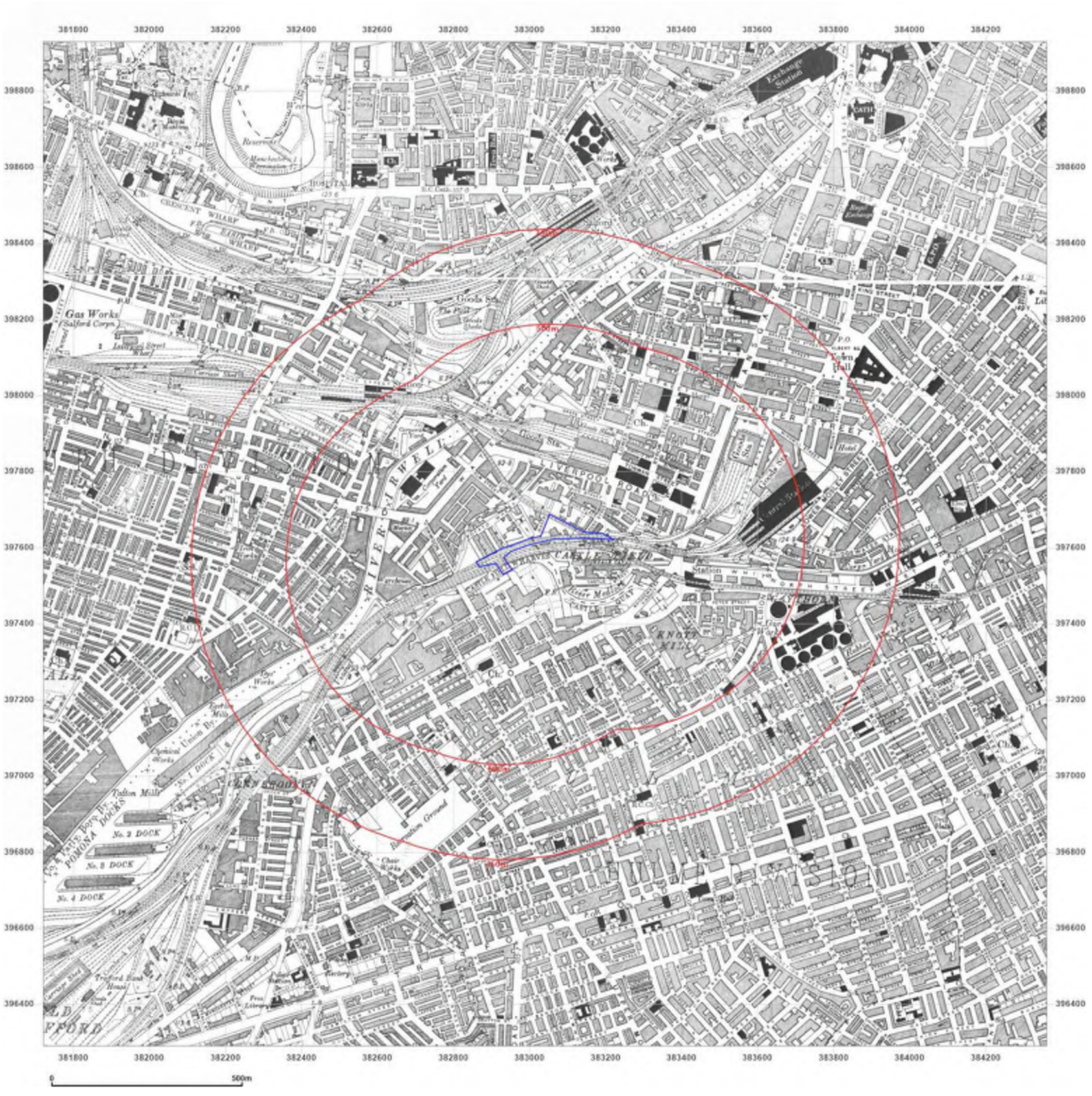
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Client Ref: PC2387-101-100
Report Ref: GS-7712230
Grid Ref: 383040, 397609

Map Name: County Series

Map date: **1923**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1844
Revised 1916
Edition 1923
Copyright N/A
Levelled 1915

Surveyed 1844
Revised 1916
Edition 1923
Copyright N/A
Levelled 1915

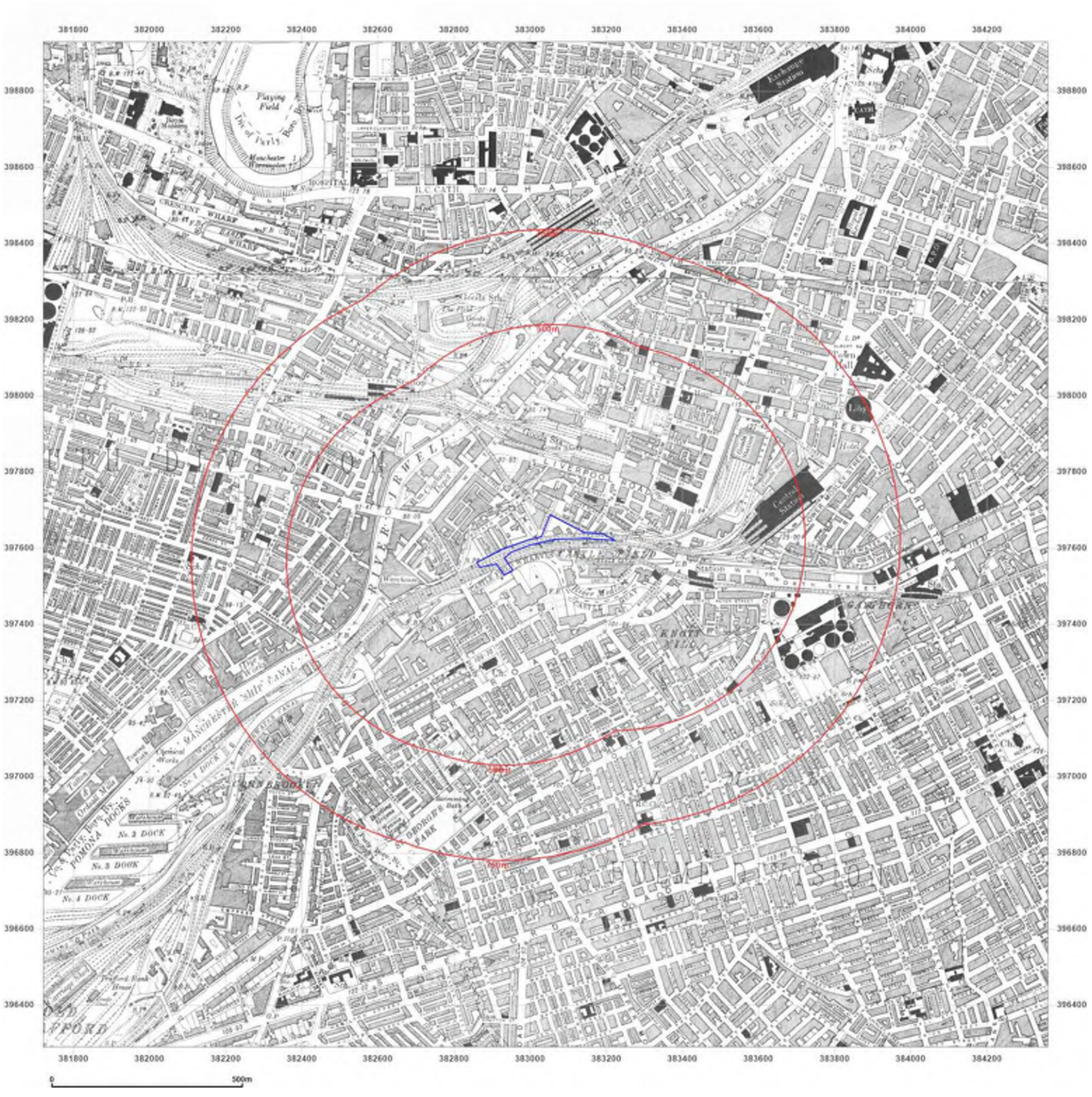
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Client Ref: PC2387-101-100
Report Ref: GS-7712230
Grid Ref: 383040, 397609

Map Name: County Series

Map date: **1931-1932**

Scale: 1:10,560

Printed at: 1:10,560

N
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Surveyed 1844
Revised 1931
Edition 1931
Copyright N/A
Levelled 1927

Surveyed 1844
Revised 1932
Edition 1932
Copyright N/A
Levelled 1927

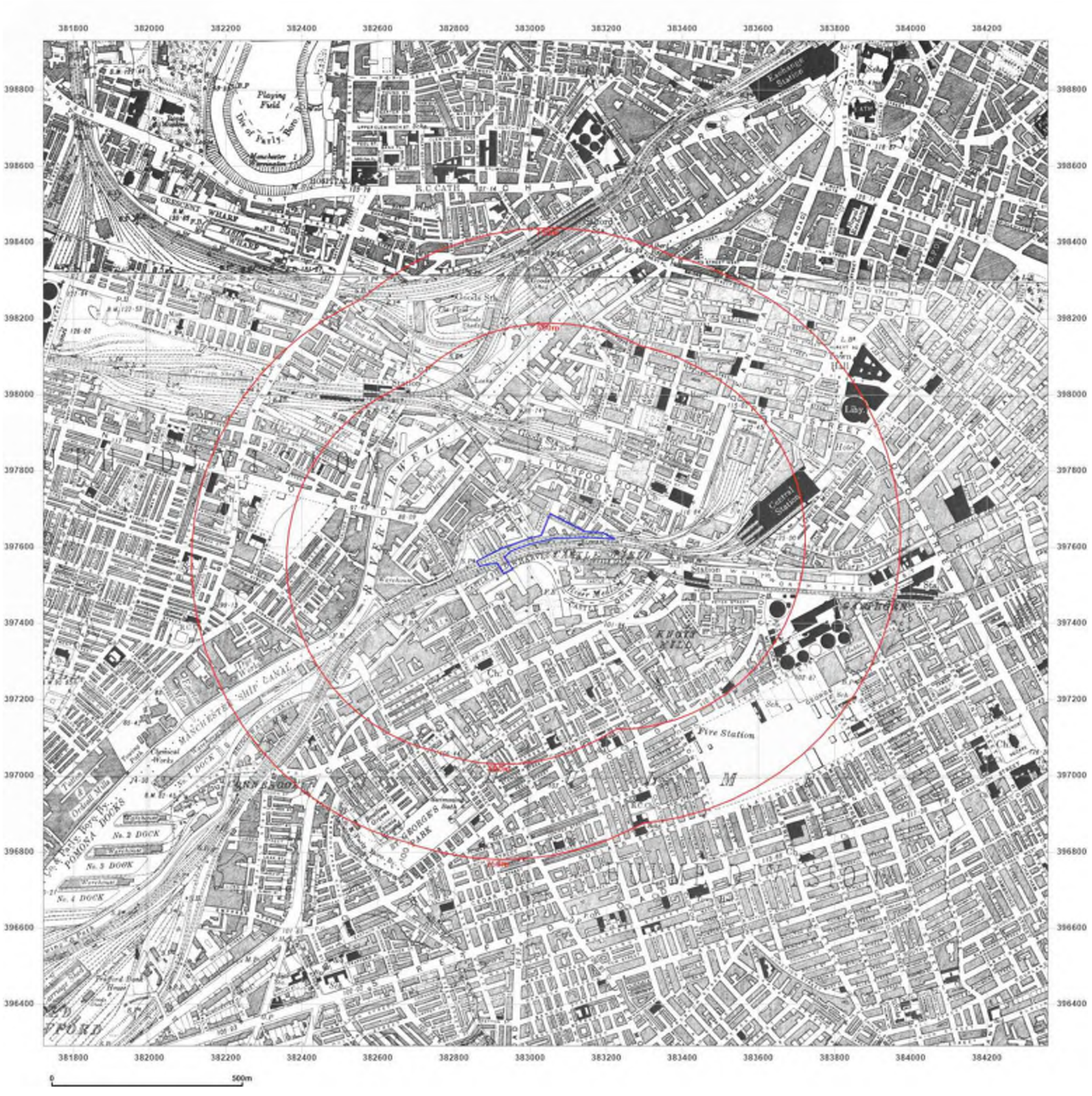
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Grid Ref: 383040, 397609

Map Name: County Series

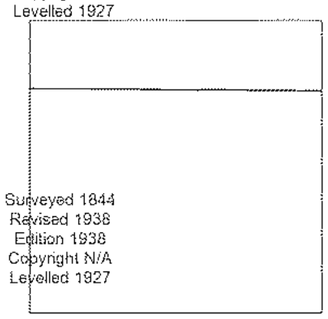
Map date: **1938**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1844
Revised 1938
Edition 1938
Copyright N/A
Levelled 1927



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Revised 1938
Edition 1938
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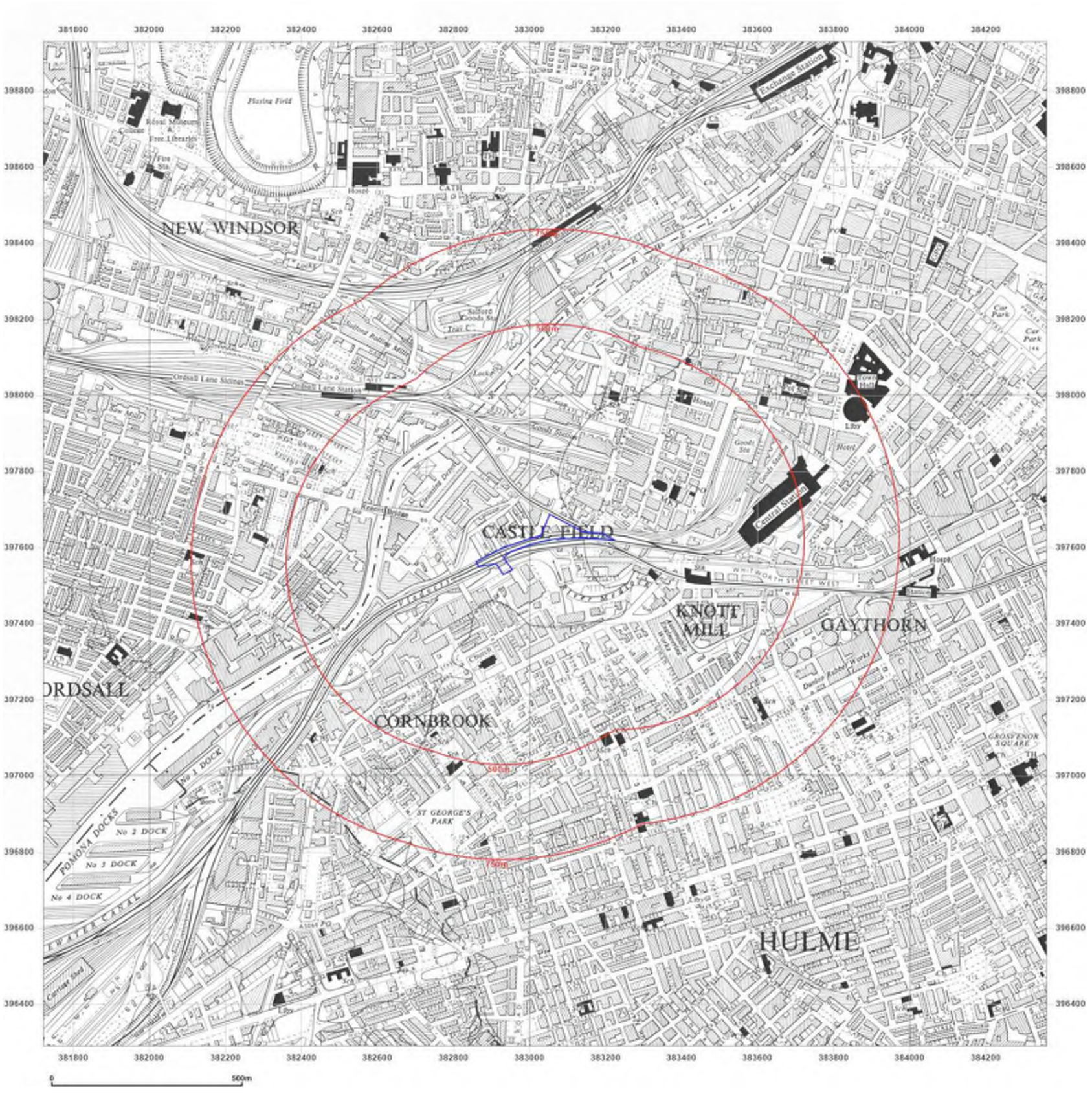
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Client Ref: PC2387-101-100
Report Ref: GS-7712230
Grid Ref: 383040, 397609

Map Name: Provisional

Map date: **1956**

Scale: 1:10,560

Printed at: 1:10,560

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Surveyed 1956
Revised 1956
Edition N/A
Copyright 1956
Levelled N/A

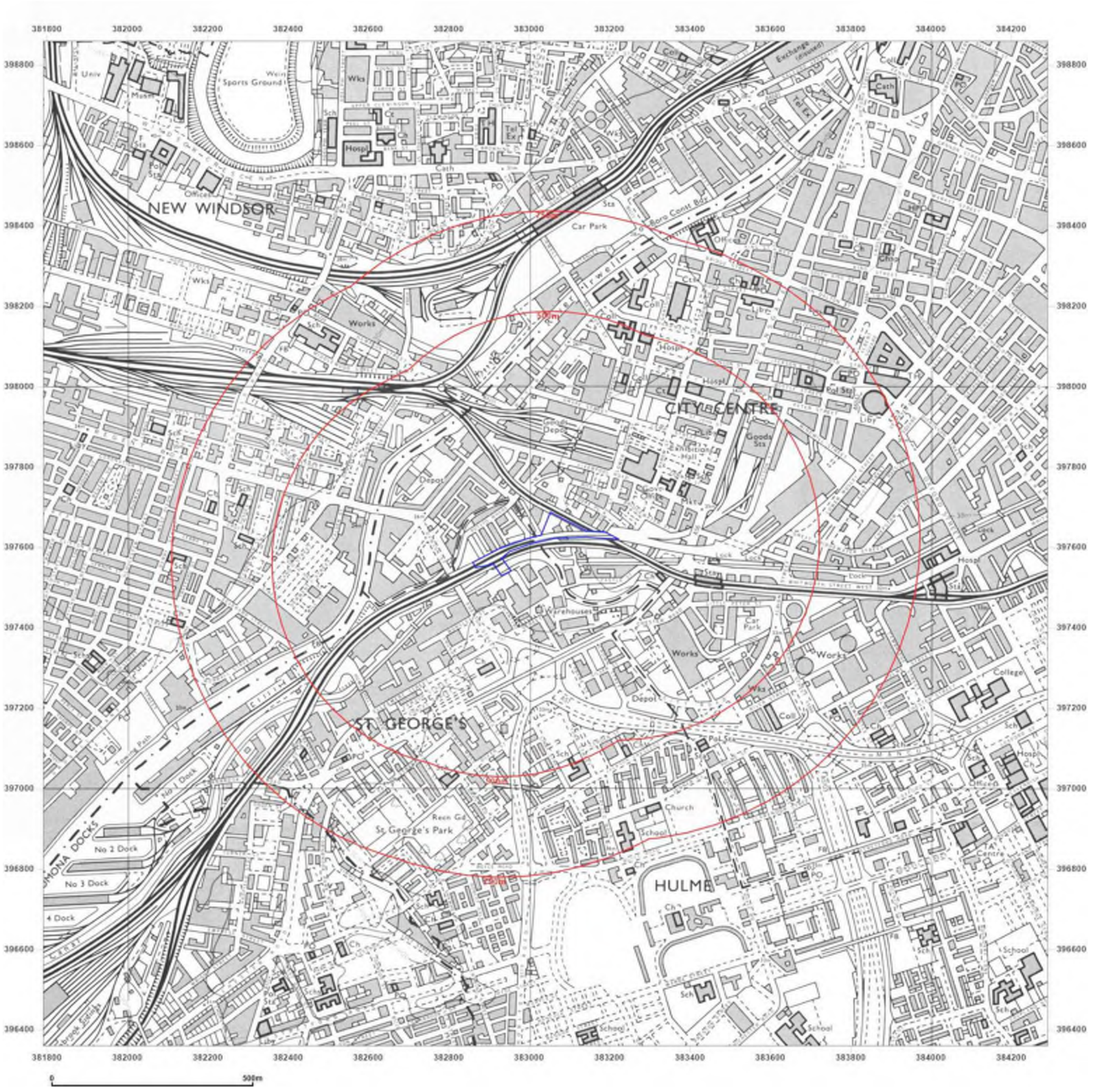
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Groundsure INSIGHTS

Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230
Grid Ref: 383040, 397609

Map Name: National Grid

Map date: **1972**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1971
Revised 1972
Edition N/A
Copyright 1972
Levelled 1972

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Groundsure INSIGHTS

Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230
Grid Ref: 383040, 397609

Map Name: National Grid

Map date: **1980**

Scale: 1:10,000

Printed at: 1:10,000

N
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Surveyed 1976
Revised 1980
Edition N/A
Copyright 1980
Levelled 1976

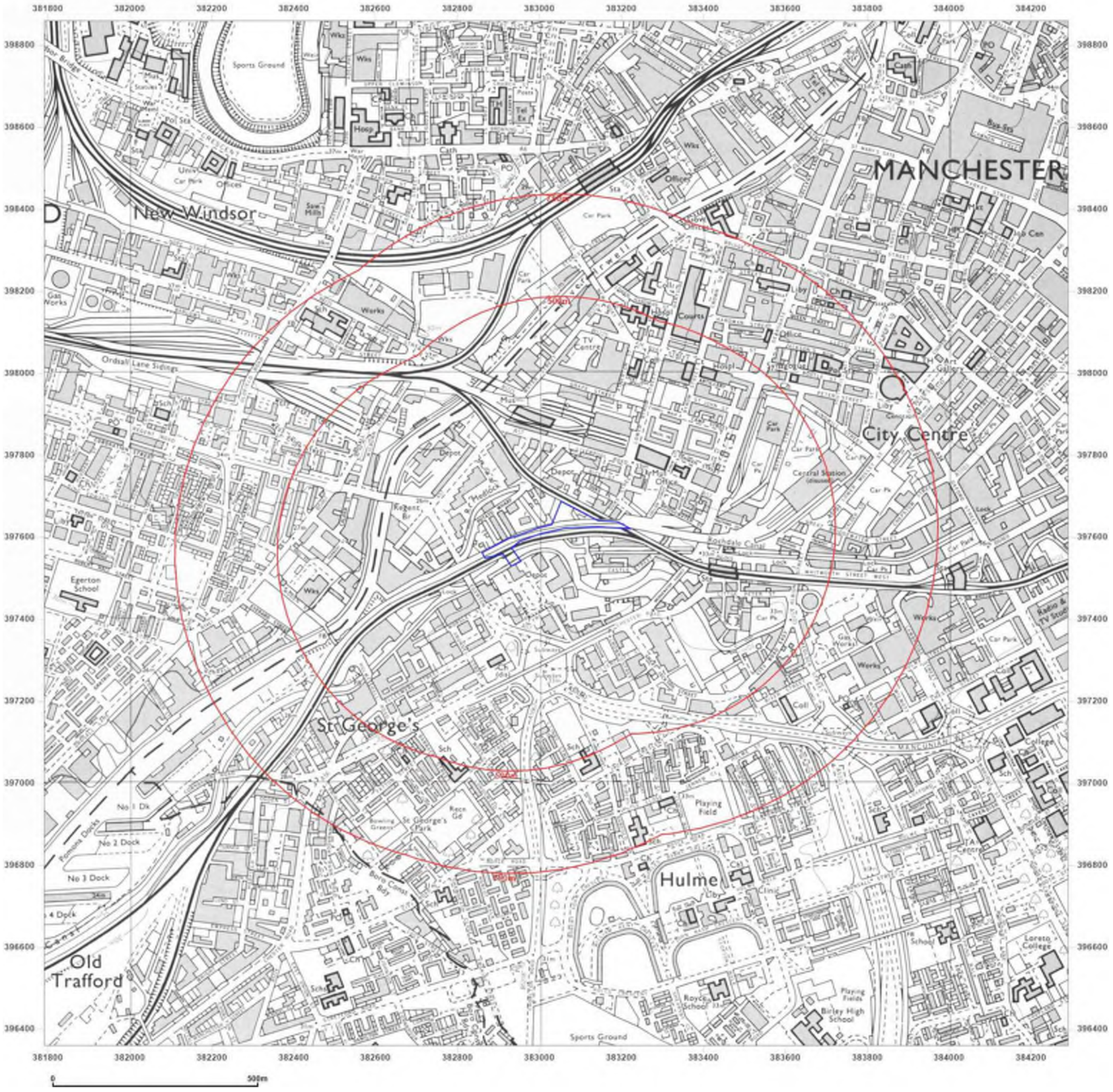
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Groundsure INSIGHTS

Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230
Grid Ref: 383040, 397609

Map Name: National Grid

Map date: **1985**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1983
Revised 1985
Edition N/A
Copyright 1985
Levelled 1981

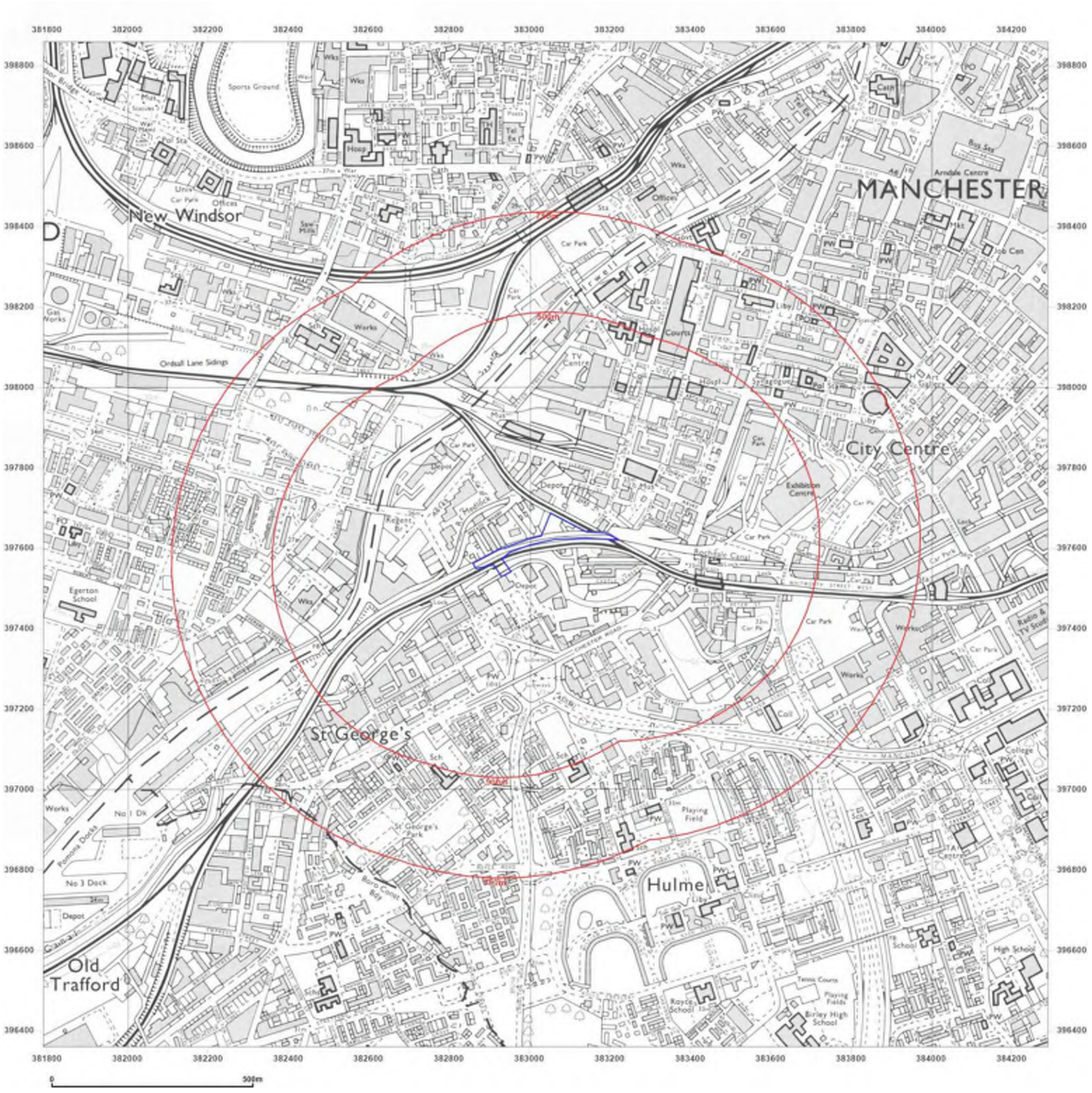
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Groundsure INSIGHTS

Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230
Grid Ref: 383040, 397609

Map Name: National Grid

Map date: **1988**

Scale: 1:10,000

Printed at: 1:10,000

N
W E
S

Surveyed 1986
Revised 1988
Edition N/A
Copyright 1988
Levelled 1981

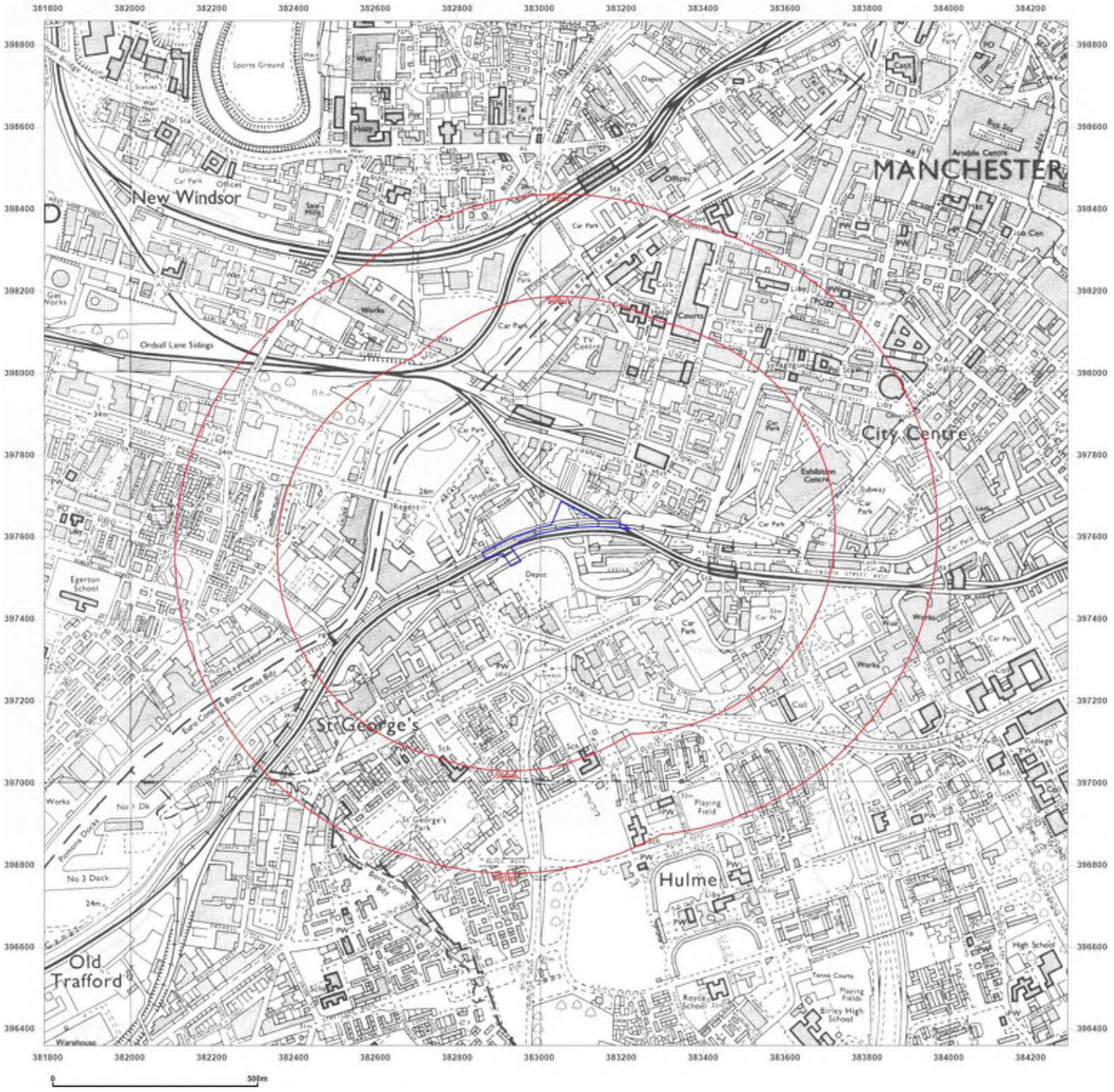
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Groundsure INSIGHTS

Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230
Grid Ref: 383040, 397609

Map Name: National Grid

Map date: **1994**

Scale: 1:10,000

Printed at: 1:10,000

N
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Surveyed 1986
Revised 1994
Edition N/A
Copyright 1994
Levelled 1981

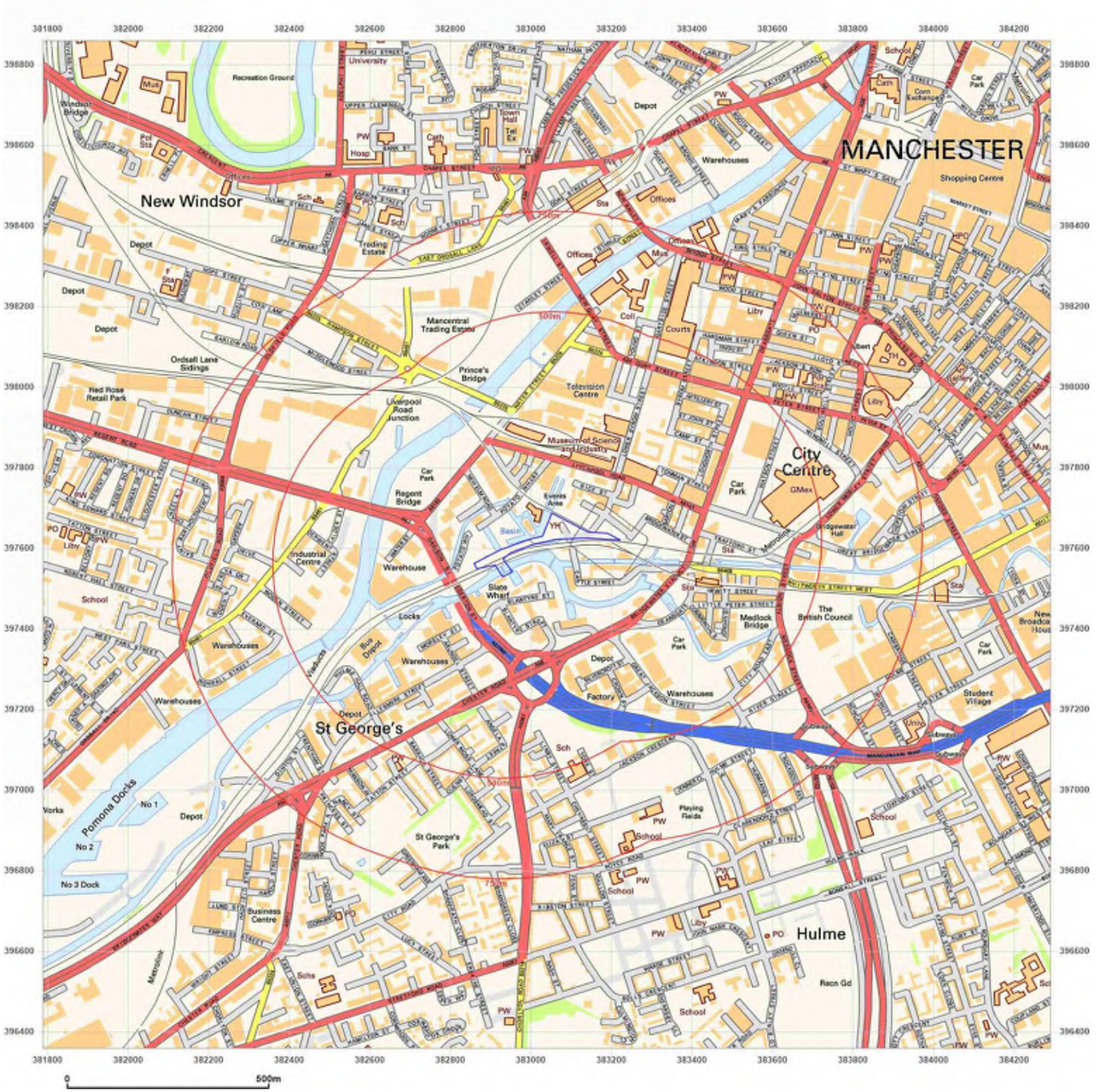
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Groundsure INSIGHTS

Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230
Grid Ref: 383040, 397609

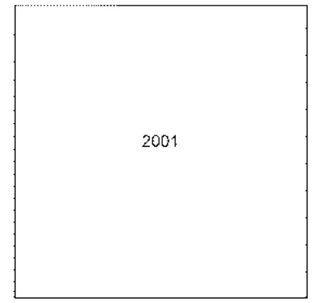
Map Name: National Grid

Map date: **2001**

Scale: 1:10,000

Printed at: 1:10,000

N
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Groundsure INSIGHTS

Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230
Grid Ref: 383040, 397609

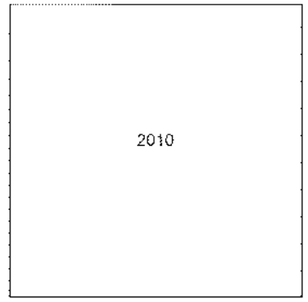
Map Name: National Grid

Map date: **2010**

Scale: 1:10,000

Printed at: 1:10,000

N
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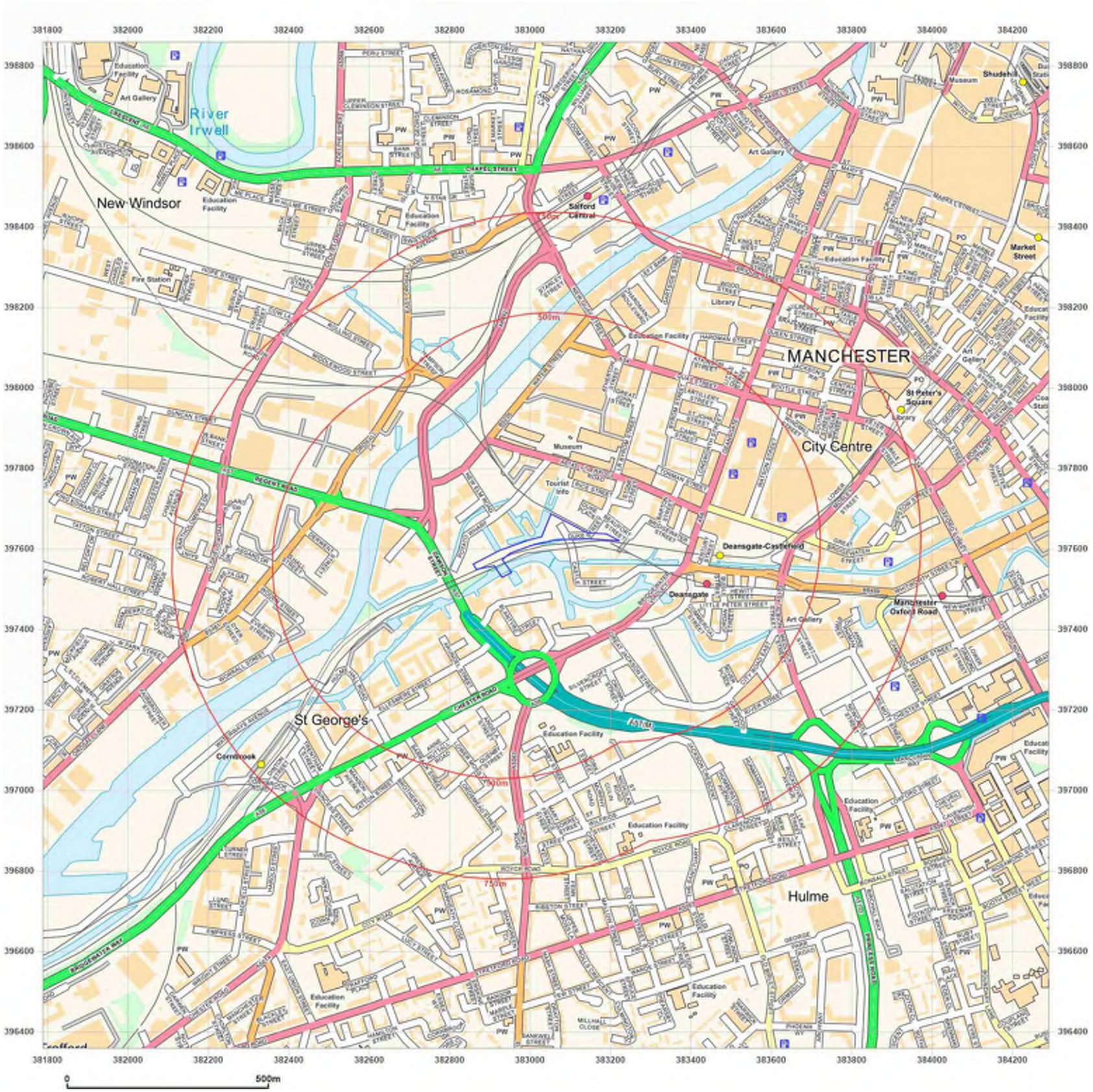
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Groundsure INSIGHTS

Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230
Grid Ref: 383040, 397609

Map Name: National Grid

Map date: **2021**

Scale: 1:10,000

Printed at: 1:10,000

N
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2021

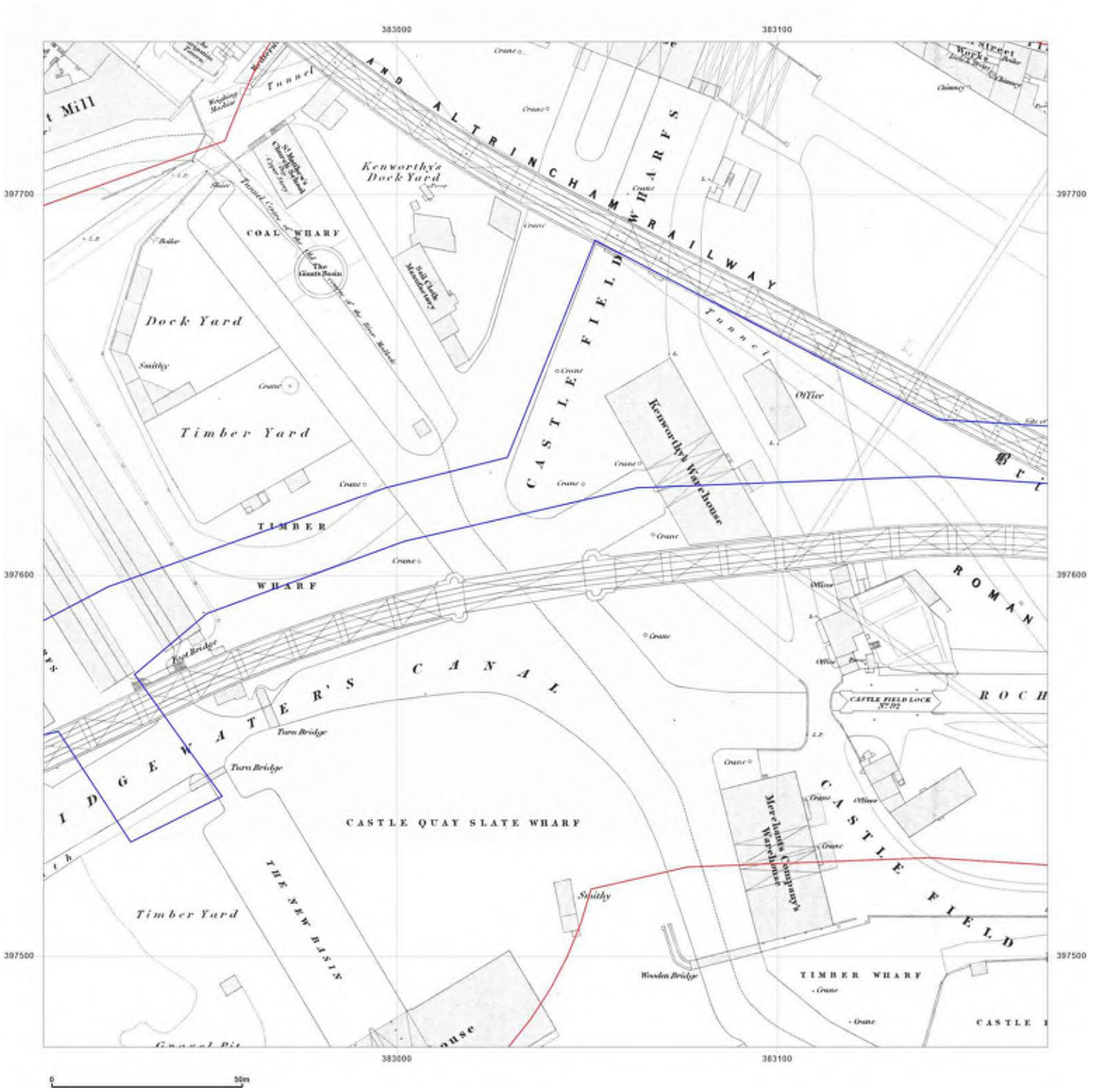
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Groundsure INSIGHTS

Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_2500
Grid Ref: 383039, 397608

Map Name: 1056 Scale Town Plan
Map date: **1851**
Scale: 1:1,056
Printed at: 1:1,056

N
W E
S

Surveyed 1849
Revised N/A
Edition 1851
Copyright N/A
Levelled N/A

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Production date: 01 April 2021

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Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_2500
Grid Ref: 383039, 397608

Map Name: County Series Town Plan
Map date: **1891**
Scale: 1:500
Printed at: 1:1,000

N
W E
S

Surveyed 1891
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1891
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

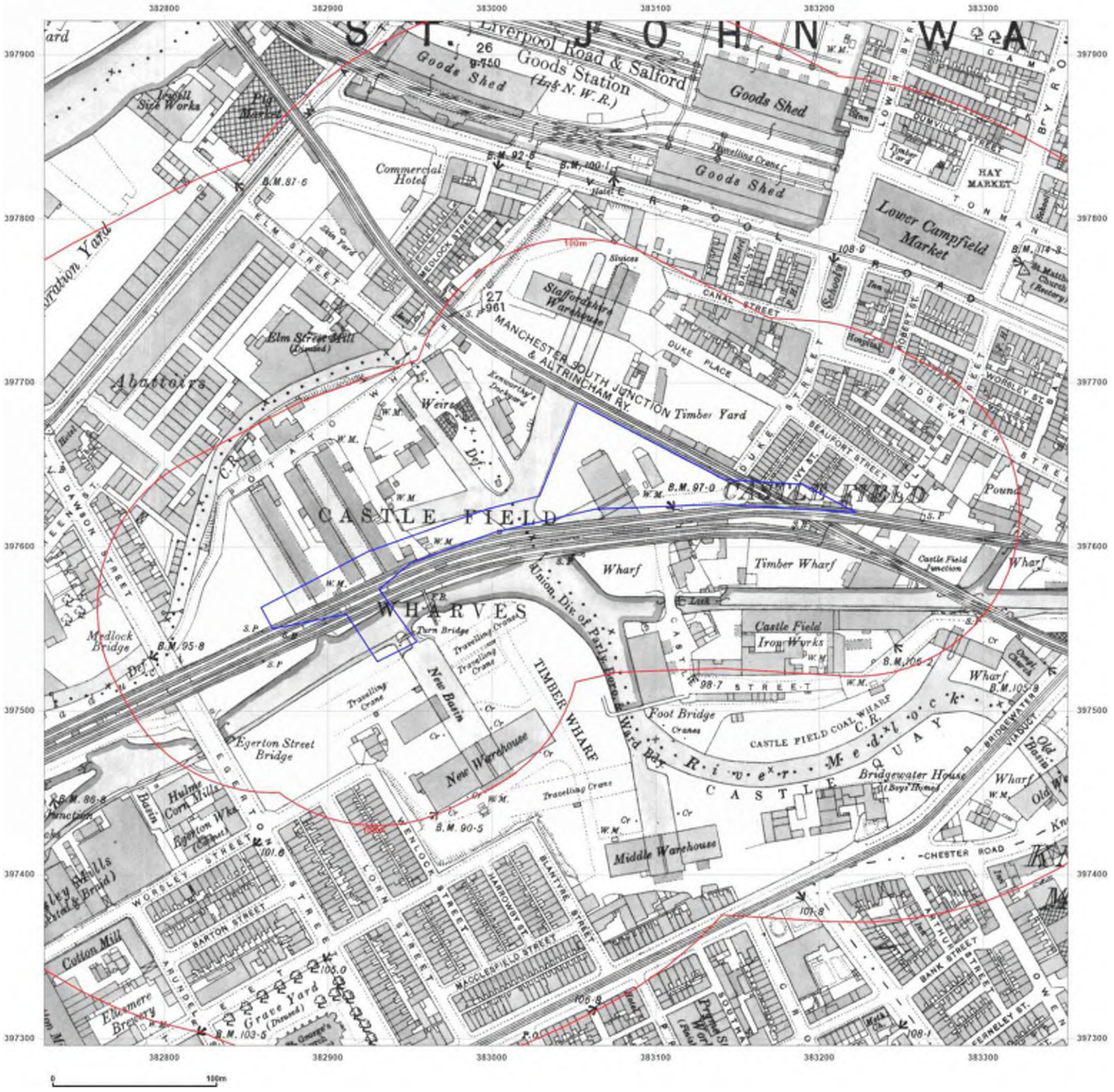
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Site Details:

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Client Ref: PC2387-101-100
Report Ref: GS-7712230_2500
Grid Ref: 383039, 397608

Map Name: County Series

Map date: **1893**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
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Surveyed 1893
Revised N/A
Edition 1893
Copyright N/A
Levelled N/A

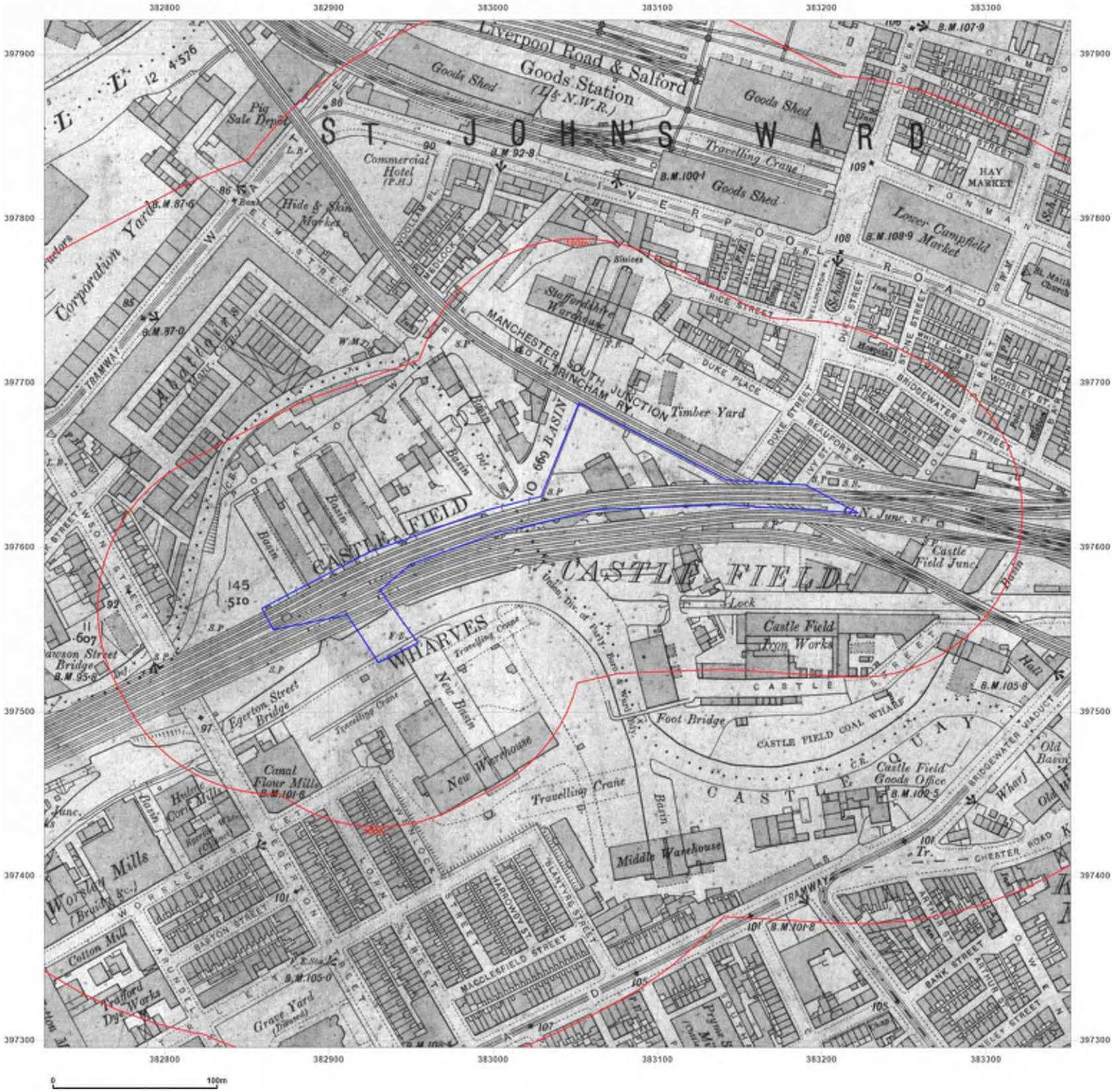
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Site Details:

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Client Ref: PC2387-101-100
Report Ref: GS-7712230_2500
Grid Ref: 383039, 397608

Map Name: County Series

Map date: **1908**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1891
Revised 1905
Edition 1908
Copyright N/A
Levelled N/A

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Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_2500
Grid Ref: 383039, 397608

Map Name: County Series

Map date: **1922**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1922
Revised 1916
Edition 1922
Copyright N/A
Levelled 1915

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Site Details:

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Client Ref: PC2387-101-100
Report Ref: GS-7712230_2500
Grid Ref: 383039, 397608

Map Name: County Series

Map date: **1932**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1873
Revised 1932
Edition N/A
Copyright N/A
Levelled 1927

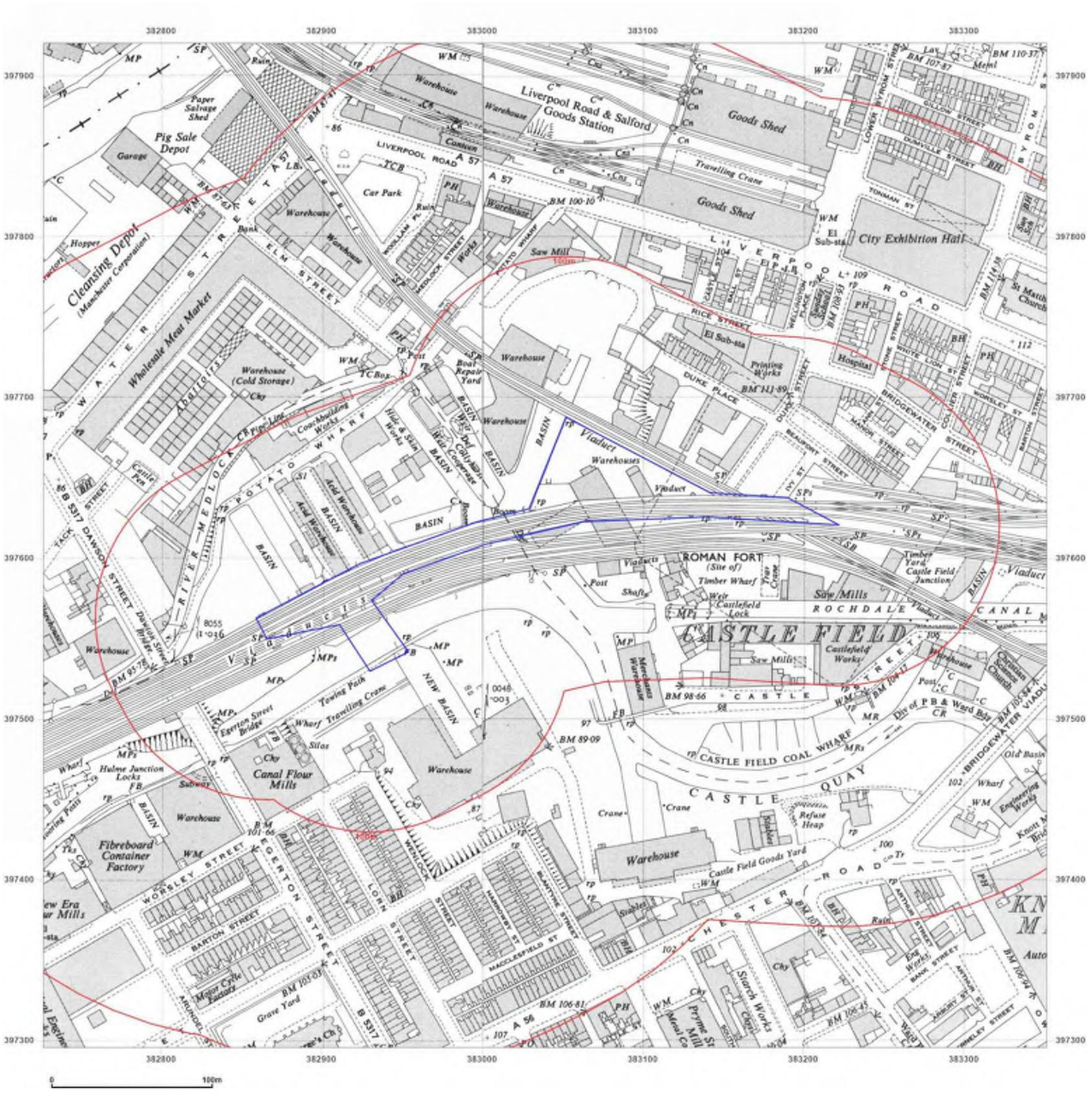
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Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_2500
Grid Ref: 383039, 397608

Map Name: National Grid

Map date: **1948-1949**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1949
Revised 1949
Edition N/A
Copyright N/A
Levelled 1948

Surveyed 1948
Revised 1948
Edition N/A
Copyright 1949
Levelled 1927

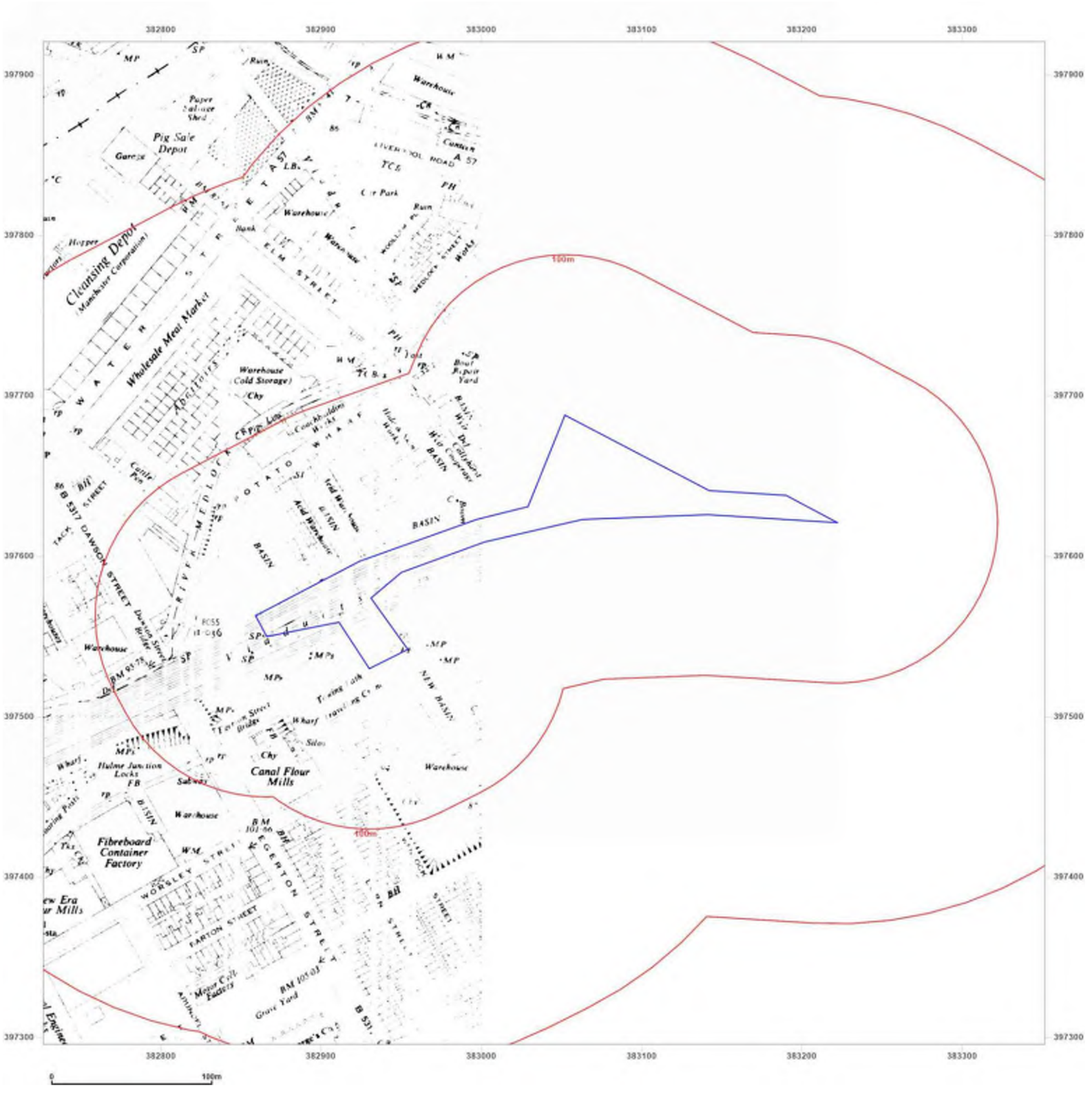
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Groundsure INSIGHTS

Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_2500
Grid Ref: 383039, 397608

Map Name: National Grid

Map date: **1950**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

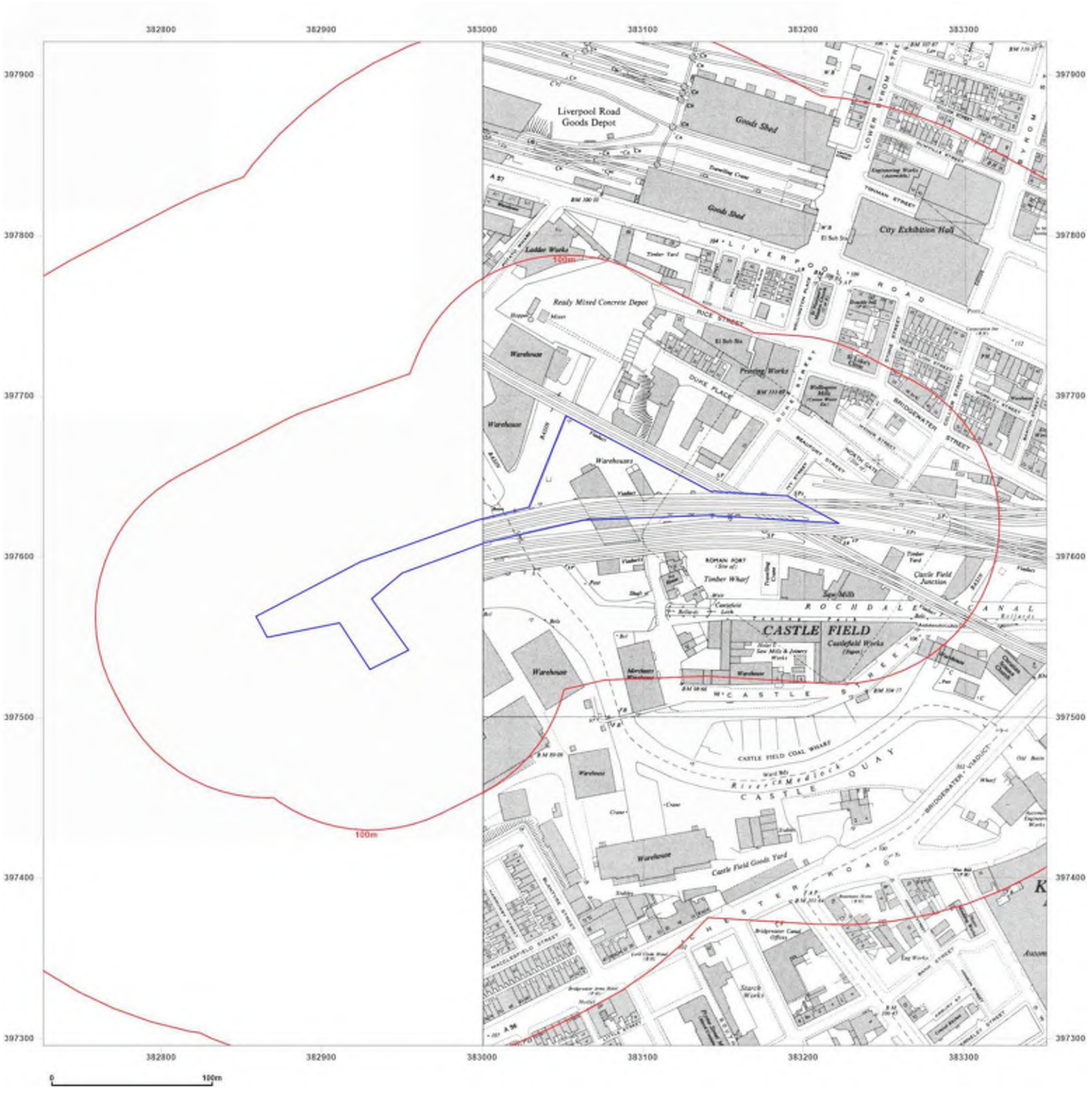
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Groundsure INSIGHTS

Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_2500
Grid Ref: 383039, 397608

Map Name: National Grid

Map date: **1956**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1953
Revised 1953
Edition N/A
Copyright 1957
Levelled 1927

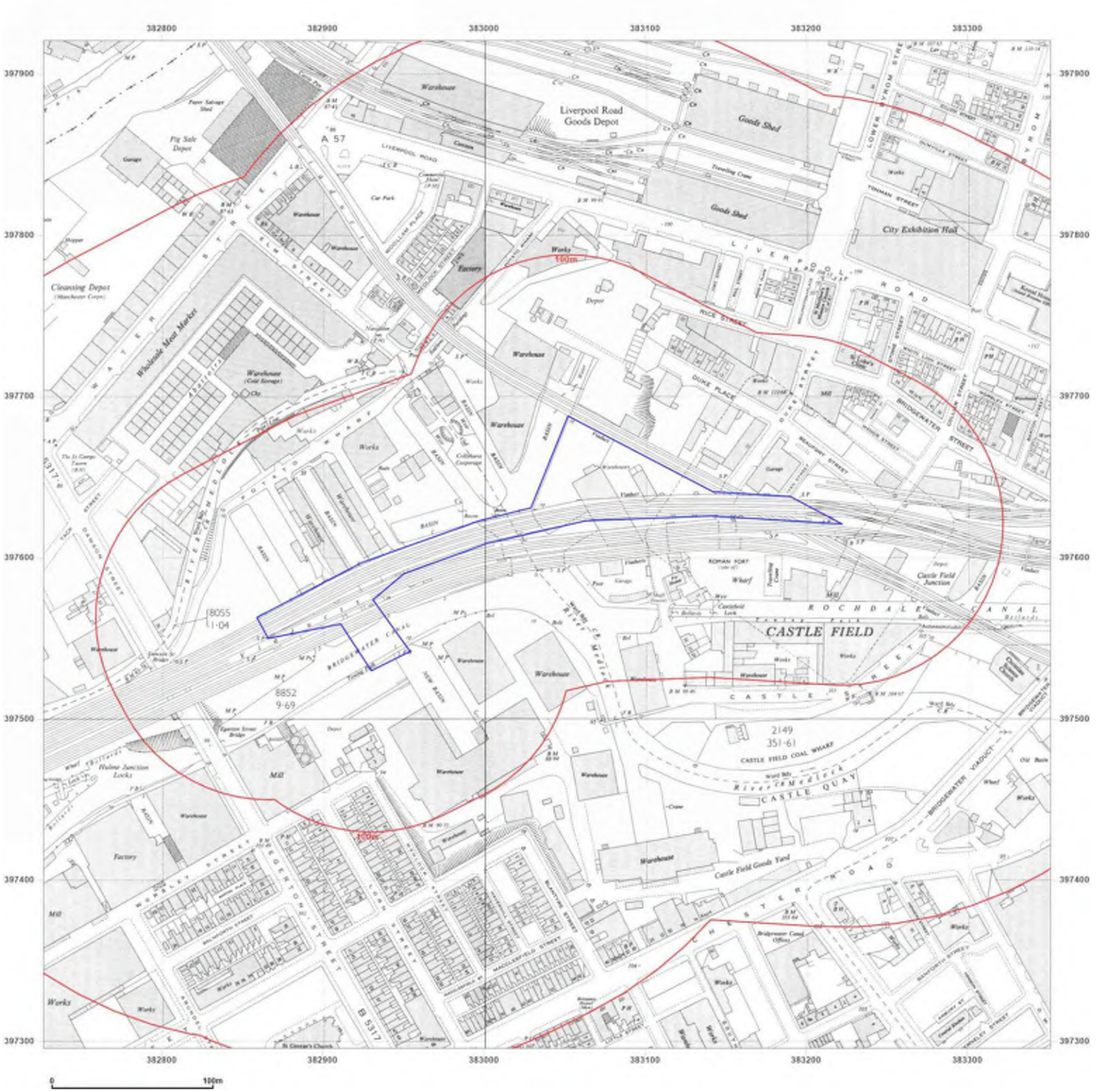
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Groundsure INSIGHTS

Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_2500
Grid Ref: 383039, 397608

Map Name: National Grid

Map date: **1963**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed 1963
Revised 1963
Edition N/A
Copyright 1965
Levelled 1958

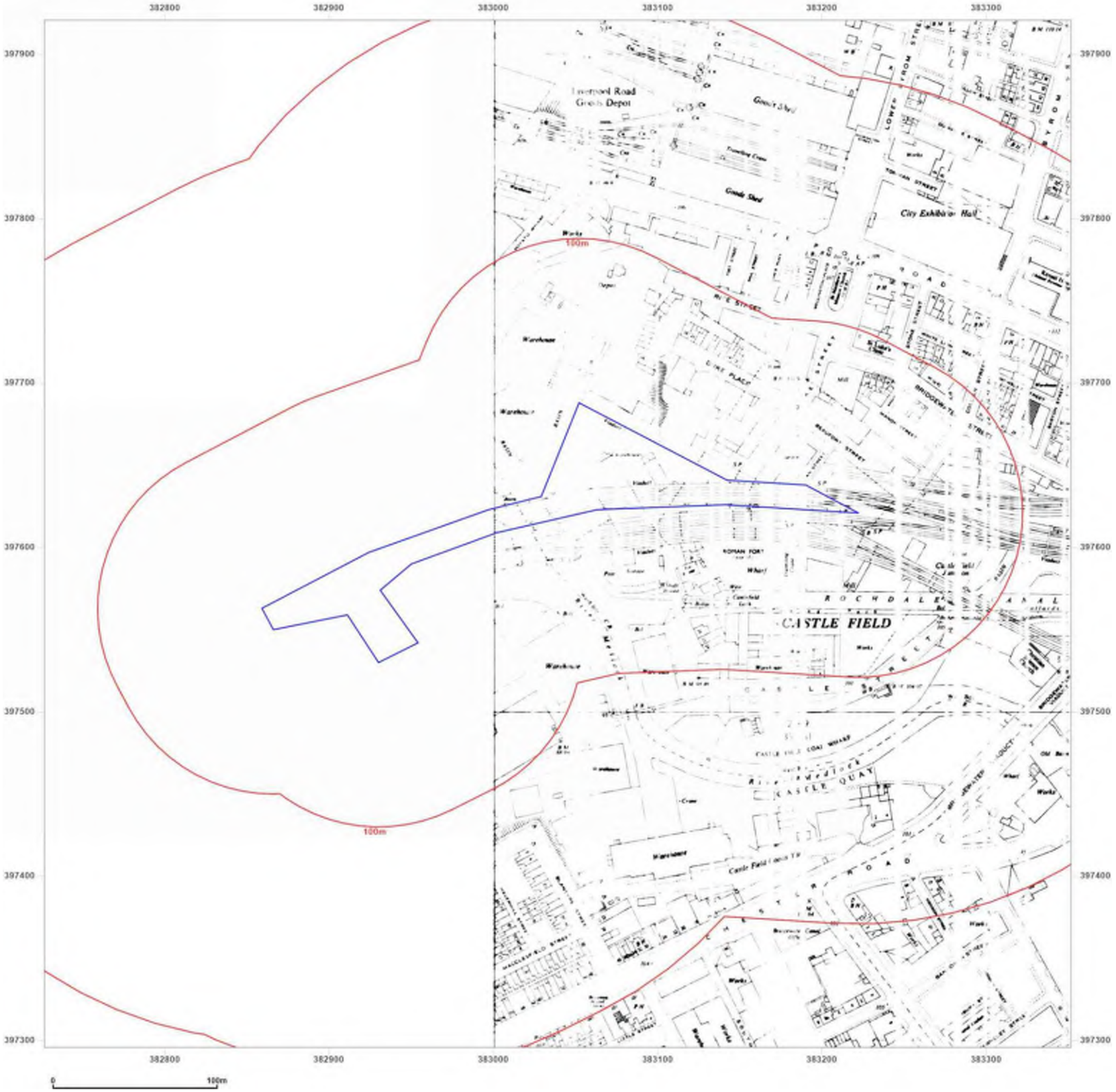
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Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_2500
Grid Ref: 383039, 397608

Map Name: National Grid

Map date: **1964**

Scale: 1:2,500

Printed at: 1:2,500

N
W E
S

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

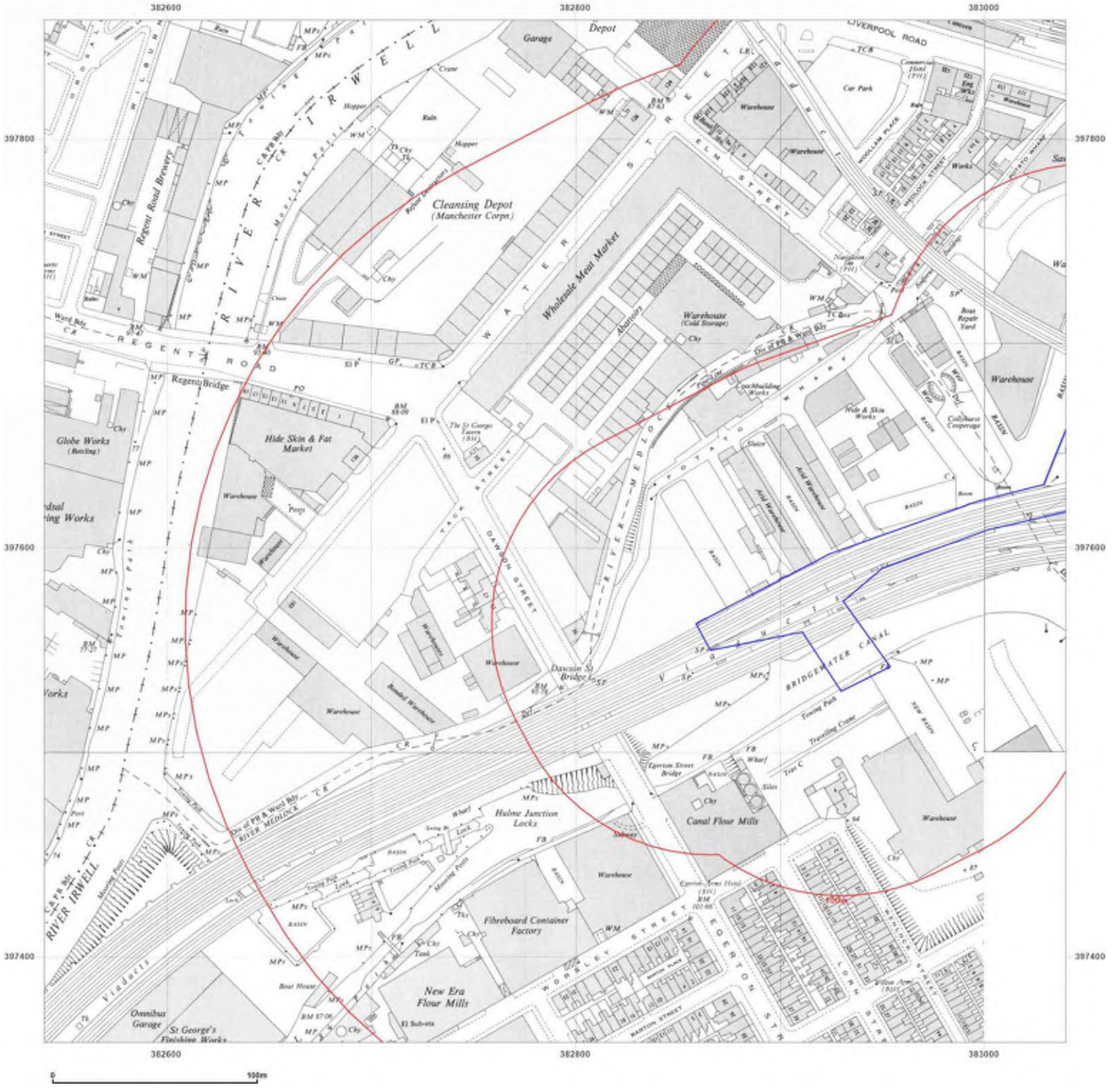
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Groundsure INSIGHTS

Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

Map Name: National Grid

Map date: **1948-1949**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
S

Surveyed 1949
Revised 1949
Edition N/A
Copyright N/A
Levelled 1948

Surveyed 1948
Revised 1948
Edition N/A
Copyright 1948
Levelled 1927

Surveyed 1948
Revised 1948
Edition N/A
Copyright N/A
Levelled 1948

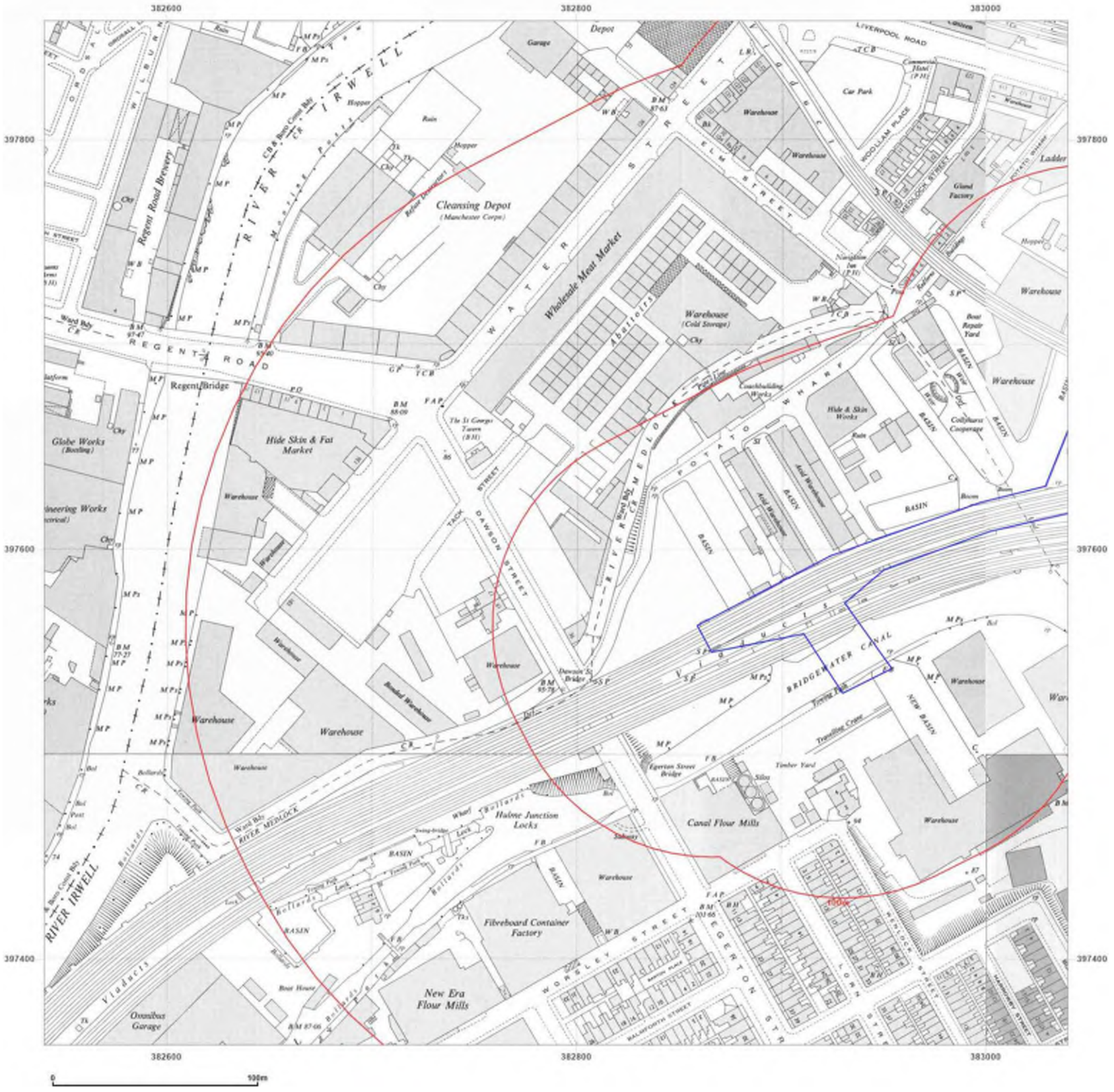
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Groundsure INSIGHTS

Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

Map Name: National Grid

Map date: **1953-1955**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
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Surveyed 1948 Revised 1952 Edition 1953 Copyright N/A Levelled 1948	Surveyed 1948 Revised 1955 Edition N/A Copyright 1955 Levelled 1927
Surveyed 1954 Revised 1954 Edition N/A Copyright N/A Levelled 1948	Surveyed 1953 Revised 1953 Edition N/A Copyright 1954 Levelled 1927

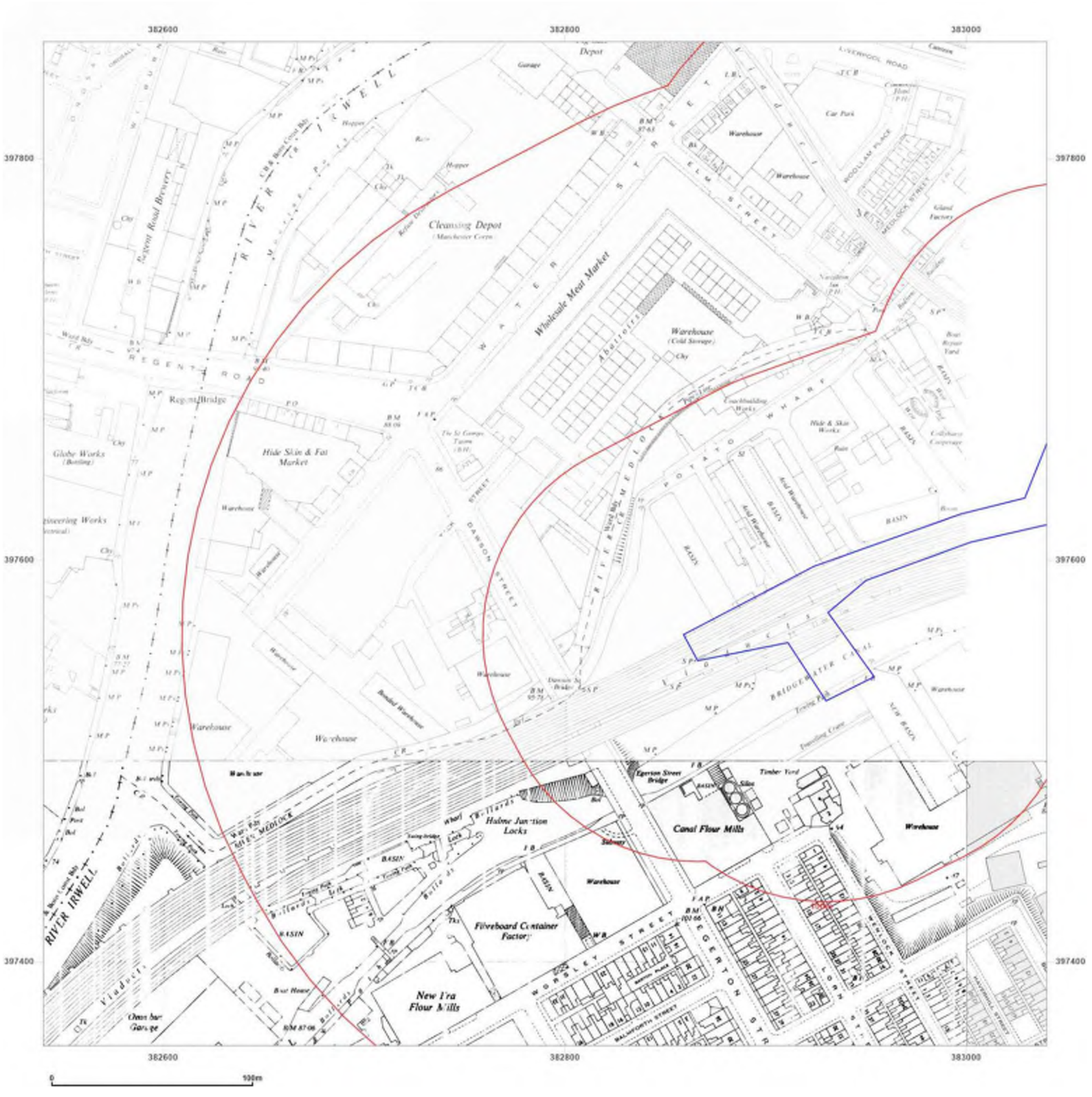
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Groundsure INSIGHTS

Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

Map Name: National Grid

Map date: **1953-1960**

Scale: 1:1,250

Printed at: 1:2,000

N
W E
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Surveyed 1949
Revised 1952
Edition 1953
Copyright N/A
Levelled 1948

Surveyed N/A
Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1959
Revised 1959
Edition N/A
Copyright 1960
Levelled 1958

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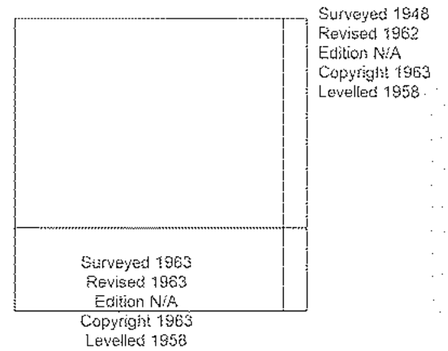
Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

Map Name: National Grid
Map date: **1963**
Scale: 1:1,250
Printed at: 1:2,000

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Site Details:

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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

Map Name: National Grid

Map date: **1977-1981**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed N/A Revised N/A Edition N/A Copyright 1978 Levelled 1963	Surveyed 1948 Revised 1979 Edition N/A Copyright 1981 Levelled 1963
Surveyed 1948 Revised 1976 Edition N/A Copyright 1977 Levelled 1963	Surveyed N/A Revised N/A Edition N/A Copyright 1980 Levelled 1963

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Site Details:

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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

Map Name: National Grid

Map date: **1980-1982**

Scale: 1:1,250

Printed at: 1:2,000

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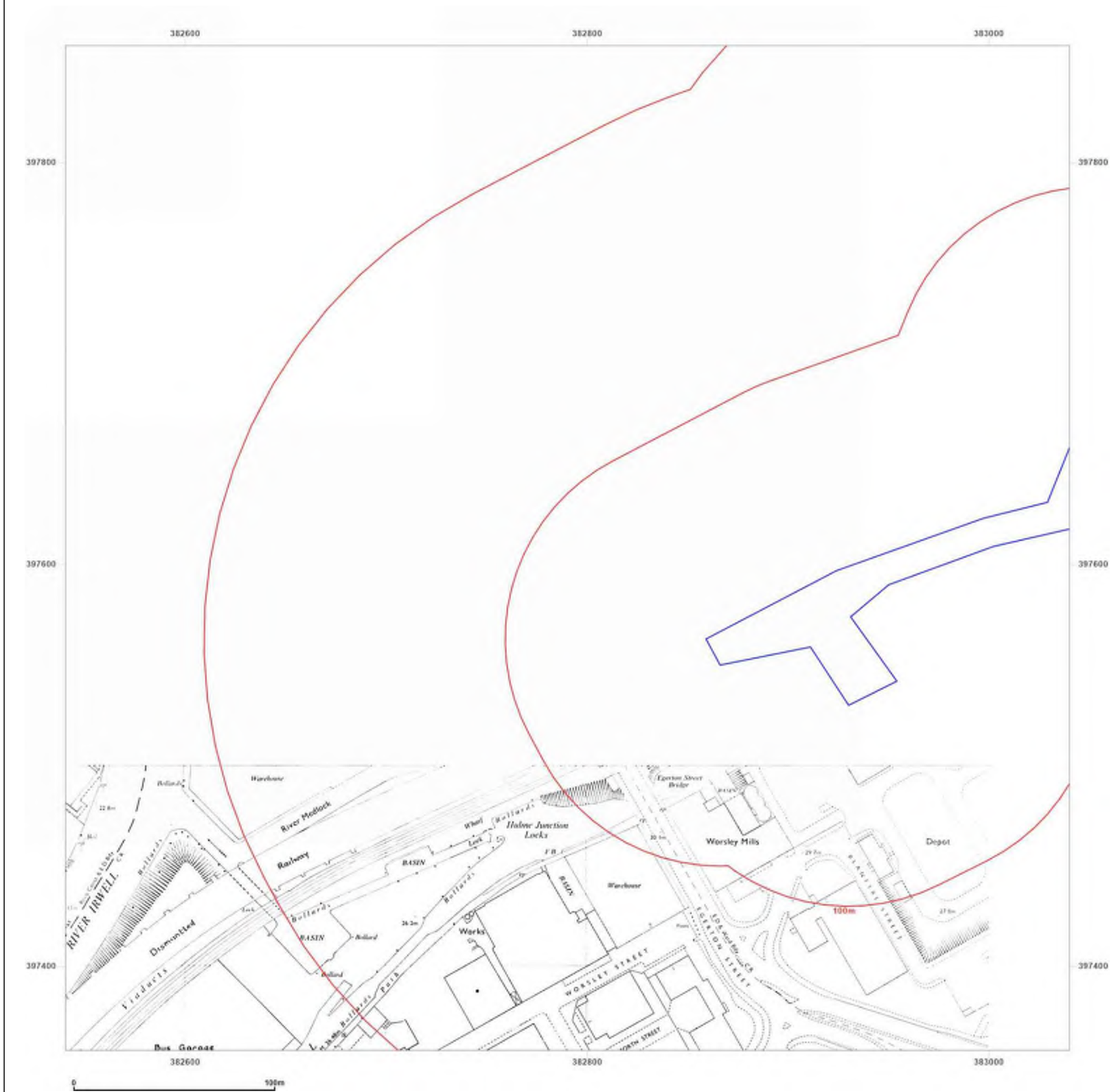
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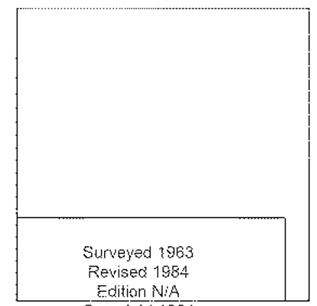
Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

Map Name: National Grid
Map date: **1984**
Scale: 1:1,250
Printed at: 1:2,000

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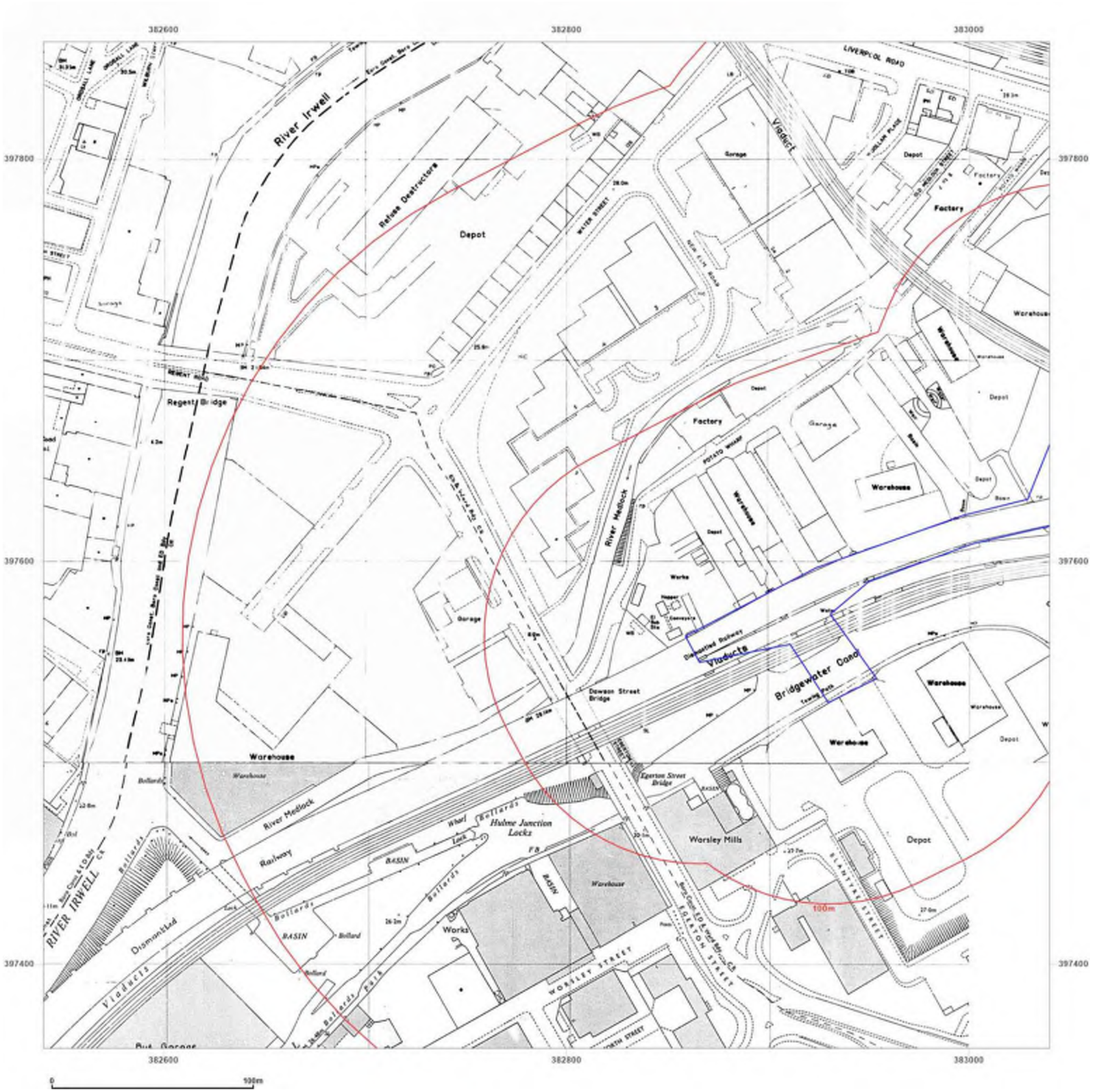
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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

Map Name: National Grid
Map date: **1982-1986**
Scale: 1:1,250
Printed at: 1:2,000

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Revised N/A
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1963
Revised 1986
Edition N/A
Copyright 1986
Levelled 1963

Surveyed N/A
Revised N/A
Edition N/A
Copyright 1982
Levelled 1963

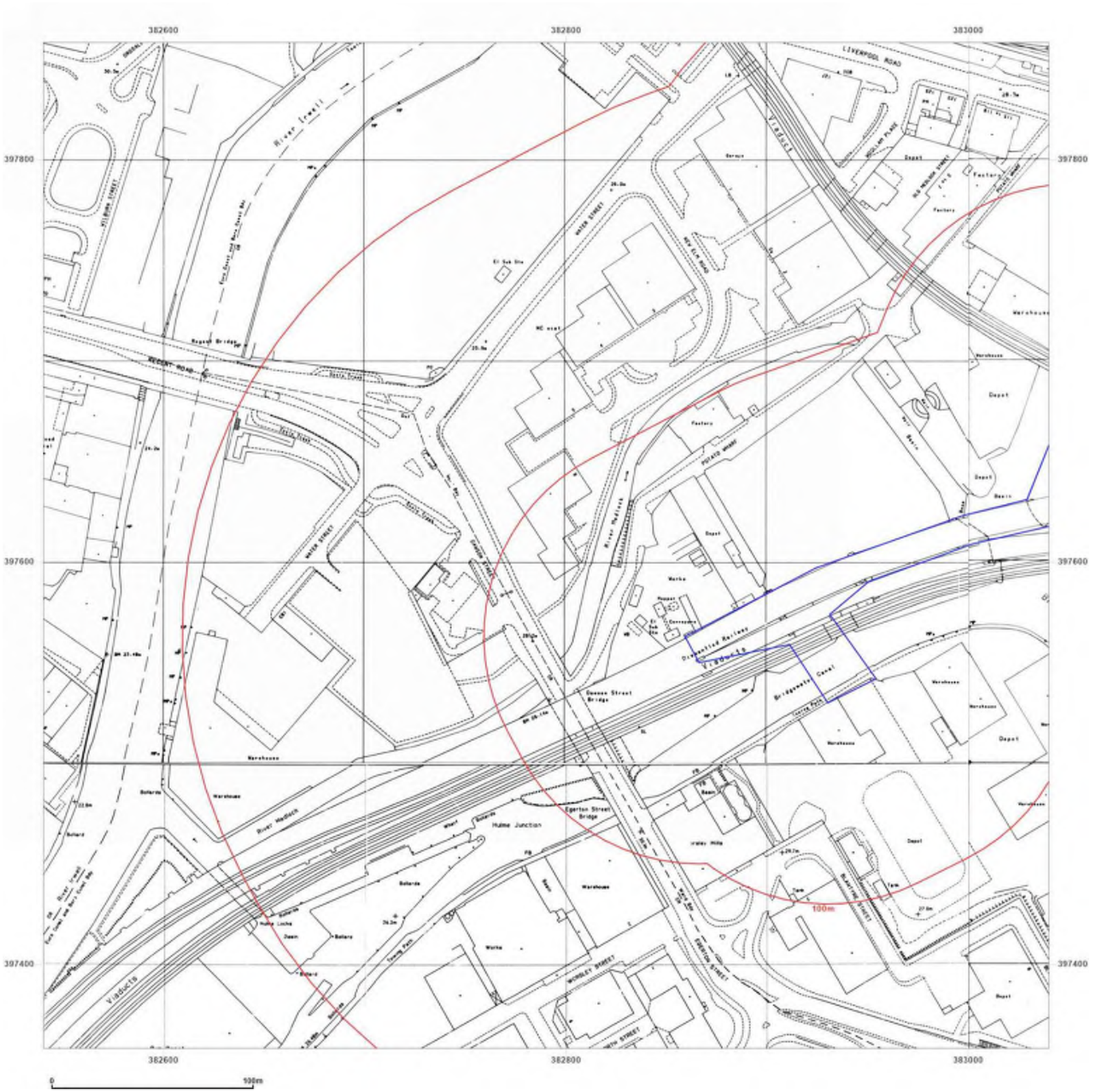
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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

Map Name: National Grid

Map date: **1990-1992**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed N/A Revised N/A Edition N/A Copyright 1992 Levelled N/A	Surveyed 1968 Revised 1968 Edition N/A Copyright 1990 Levelled N/A

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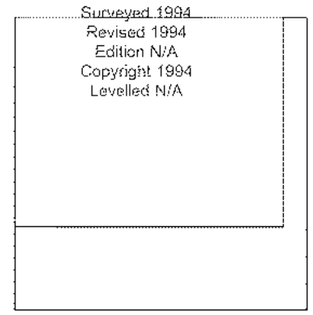
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LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

Map Name: National Grid
Map date: **1994**
Scale: 1:1,250
Printed at: 1:2,000

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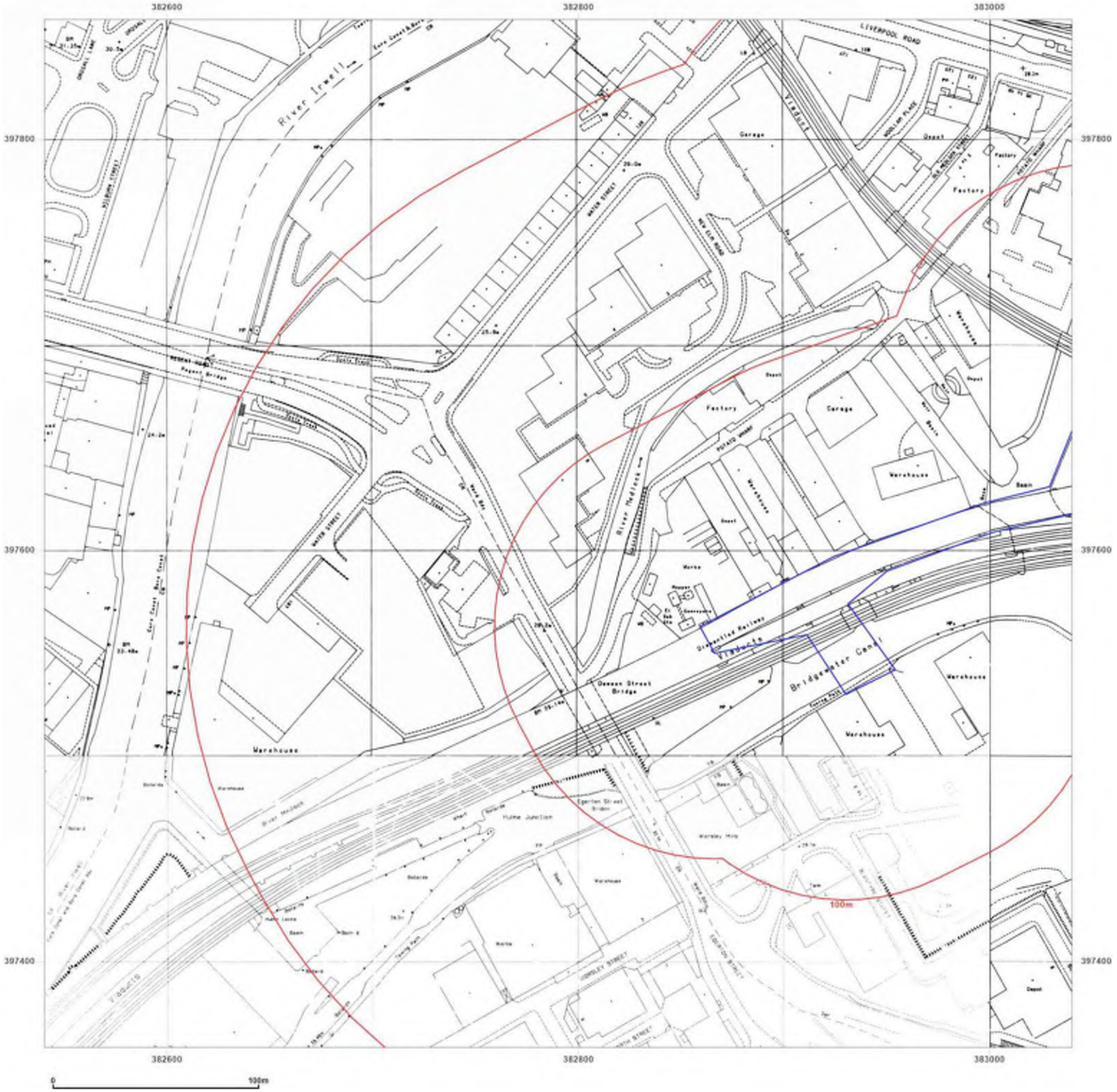
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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

Map Name: National Grid

Map date: **1990-1995**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1979 Revised 1979 Edition N/A Copyright 1990 Levelled N/A	Surveyed 1992 Revised 1992 Edition N/A Copyright 1992 Levelled N/A
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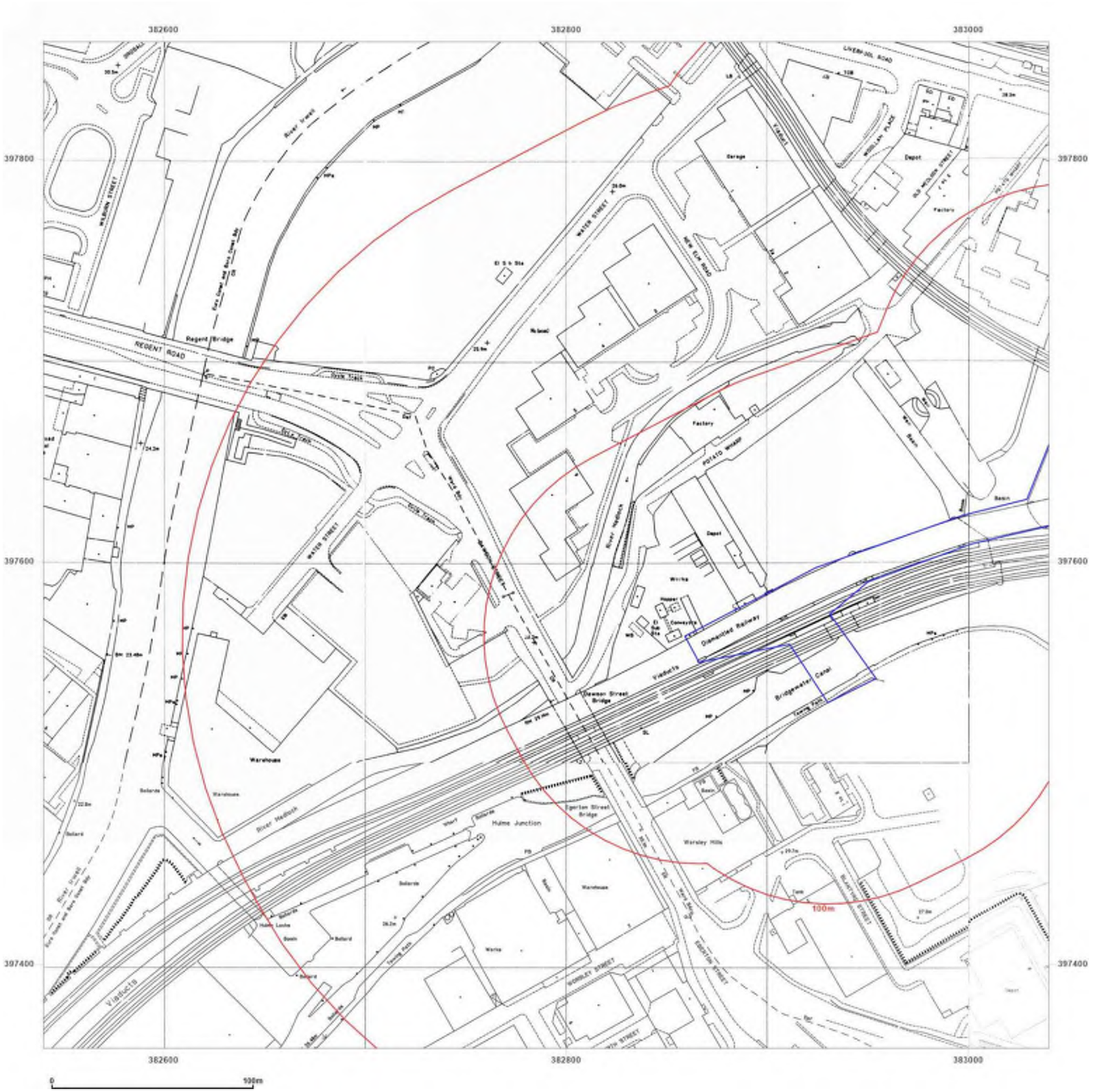
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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

Map Name: National Grid

Map date: **1992-1995**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed N/A
Revised N/A
Edition N/A
Copyright 1992
Levelled N/A

Surveyed 1994
Revised 1994
Edition N/A
Copyright 1994
Levelled N/A

Surveyed N/A
Revised 1993
Edition N/A
Copyright 1995
Levelled N/A

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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

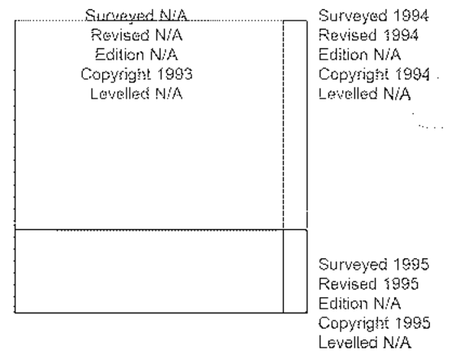
Map Name: National Grid

Map date: **1993-1995**

Scale: 1:1,250

Printed at: 1:2,000

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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

Map Name: National Grid

Map date: **1993-1995**

Scale: 1:1,250

Printed at: 1:2,000

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Edition N/A
Copyright 1993
Levelled N/A

Surveyed 1995
Revised 1995
Edition N/A
Copyright 1995
Levelled N/A

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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

Map Name: National Grid

Map date: **1994-1995**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed N/A
Revised N/A
Edition N/A
Copyright 1994
Levelled N/A

Surveyed 1995
Revised 1995
Edition N/A
Copyright 1995
Levelled N/A

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Revised 1995
Edition N/A
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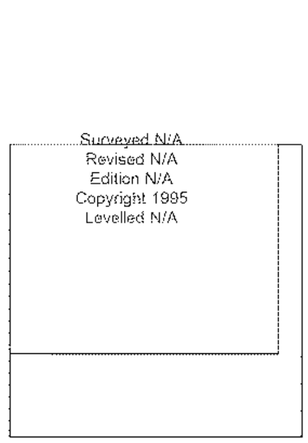
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LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

Map Name: National Grid
Map date: **1995**
Scale: 1:1,250
Printed at: 1:2,000

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Site Details:

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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

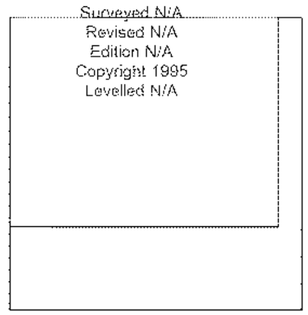
Map Name: National Grid

Map date: **1995**

Scale: 1:1,250

Printed at: 1:2,000

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Site Details:

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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

Map Name: National Grid

Map date: **1995**

Scale: 1:1,250

Printed at: 1:2,000

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Revised 1995
Edition N/A
Copyright 1995
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Site Details:

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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_1_1
Grid Ref: 382790, 397608

Map Name: National Grid
Map date: **1995**
Scale: 1:1,250
Printed at: 1:2,000

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Surveyed N/A
Revised N/A
Edition N/A
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Site Details:

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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_2_1
Grid Ref: 383290, 397608

Map Name: National Grid

Map date: **1948-1953**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1948
Revised 1948
Edition N/A
Copyright 1948
Levelled 1927

Surveyed 1948
Revised 1948
Edition N/A
Copyright 1948
Levelled 1927

Surveyed 1948
Revised 1953
Edition N/A
Copyright 1953
Levelled 1927

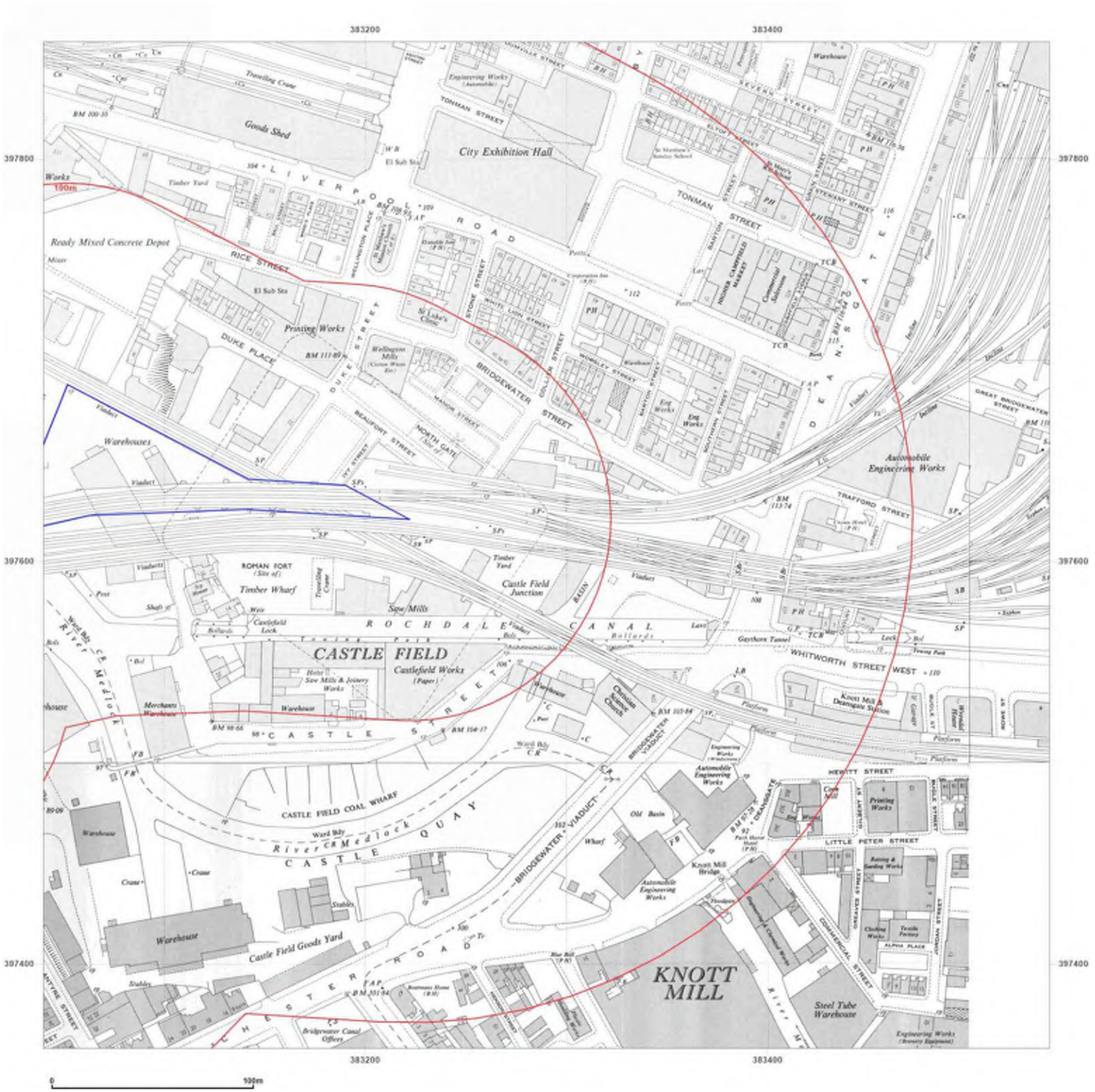
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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_2_1
Grid Ref: 383290, 397608

Map Name: National Grid

Map date: **1951-1955**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1948
Revised 1955
Edition N/A
Copyright 1955
Levelled 1927

Surveyed 1951
Revised 1951
Edition N/A
Copyright 1951
Levelled 1927

Surveyed 1953
Revised 1953
Edition N/A
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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_2_1
Grid Ref: 383290, 397608

Map Name: National Grid

Map date: **1960-1963**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1948
Revised 1962
Edition N/A
Copyright 1963
Levelled 1958

Surveyed 1959
Revised 1959
Edition N/A
Copyright 1960
Levelled 1958

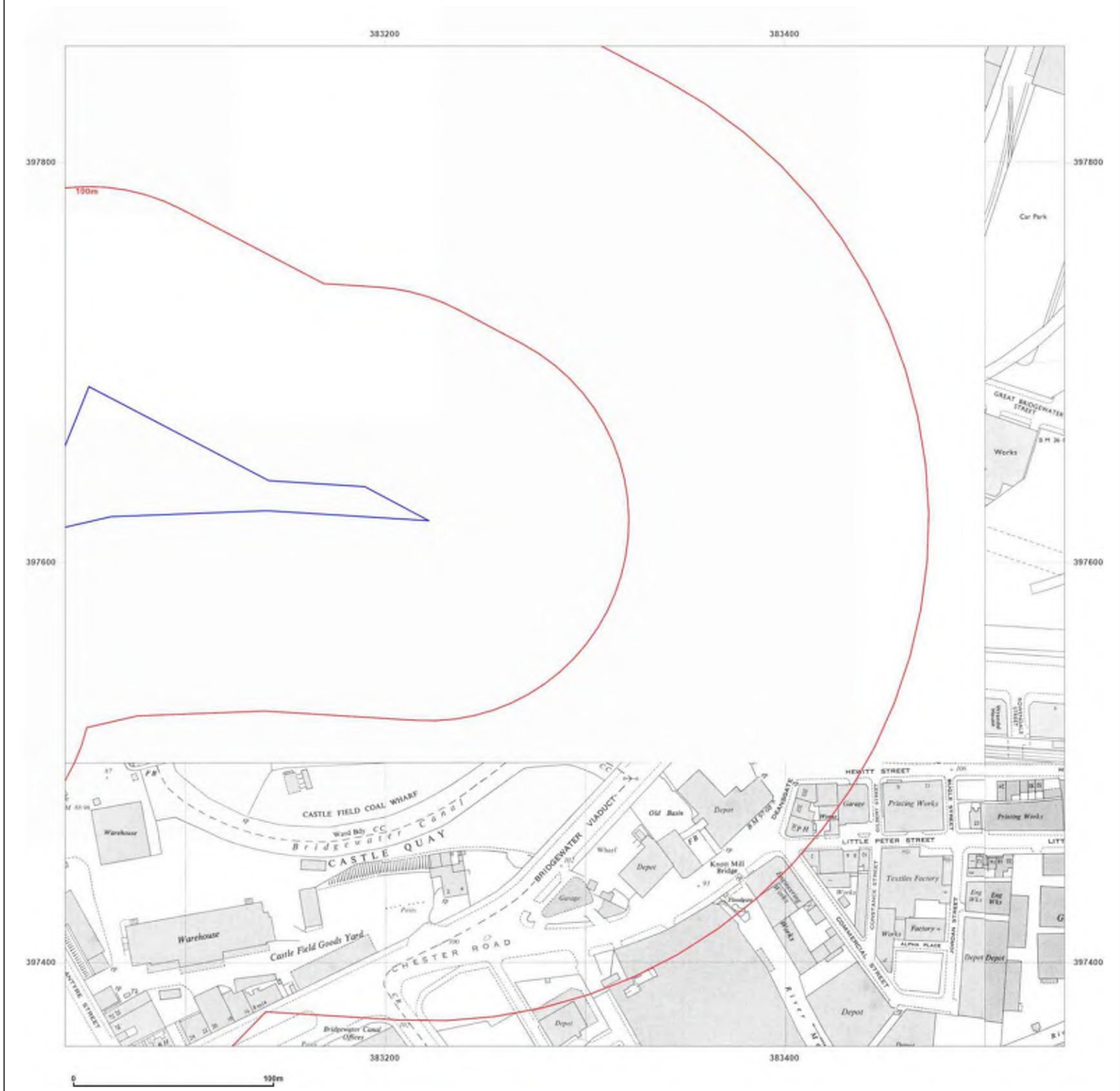
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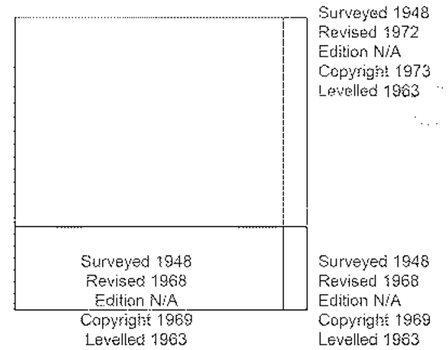
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LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_2_1
Grid Ref: 383290, 397608

Map Name: National Grid
Map date: **1969-1973**
Scale: 1:1,250
Printed at: 1:2,000

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Site Details:

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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_2_1
Grid Ref: 383290, 397608

Map Name: National Grid

Map date: **1980-1985**

Scale: 1:1,250

Printed at: 1:2,000

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Surveyed 1948 Revised 1979 Edition N/A Copyright 1981 Levelled 1963	Surveyed N/A Revised N/A Edition N/A Copyright 1985 Levelled 1963
Surveyed N/A Revised N/A Edition N/A Copyright 1980 Levelled 1963	Surveyed N/A Revised N/A Edition N/A Copyright 1980 Levelled 1963

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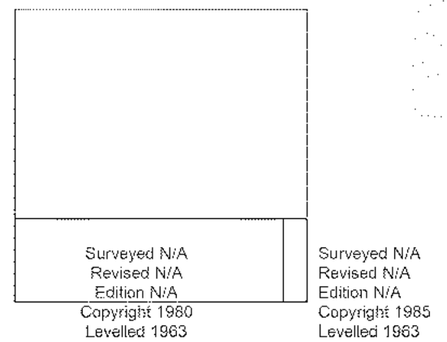
Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_2_1
Grid Ref: 383290, 397608

Map Name: National Grid
Map date: **1980-1985**
Scale: 1:1,250
Printed at: 1:2,000

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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_2_1
Grid Ref: 383290, 397608

Map Name: National Grid

Map date: **1986-1990**

Scale: 1:1,250

Printed at: 1:2,000

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Groundsure INSIGHTS

Site Details:

LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_2_1
Grid Ref: 383290, 397608

Map Name: National Grid

Map date: **1987-1992**

Scale: 1:1,250

Printed at: 1:2,000

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Grid Ref: 383290, 397608

Map Name: National Grid

Map date: **1992-1995**

Scale: 1:1,250

Printed at: 1:2,000

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Map Name: National Grid

Map date: **1994-1995**

Scale: 1:1,250

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Groundsure INSIGHTS

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Client Ref: PC2387-101-100
Report Ref: GS-7712230_1250_2_1
Grid Ref: 383290, 397608

Map Name: National Grid
Map date: **1995**
Scale: 1:1,250
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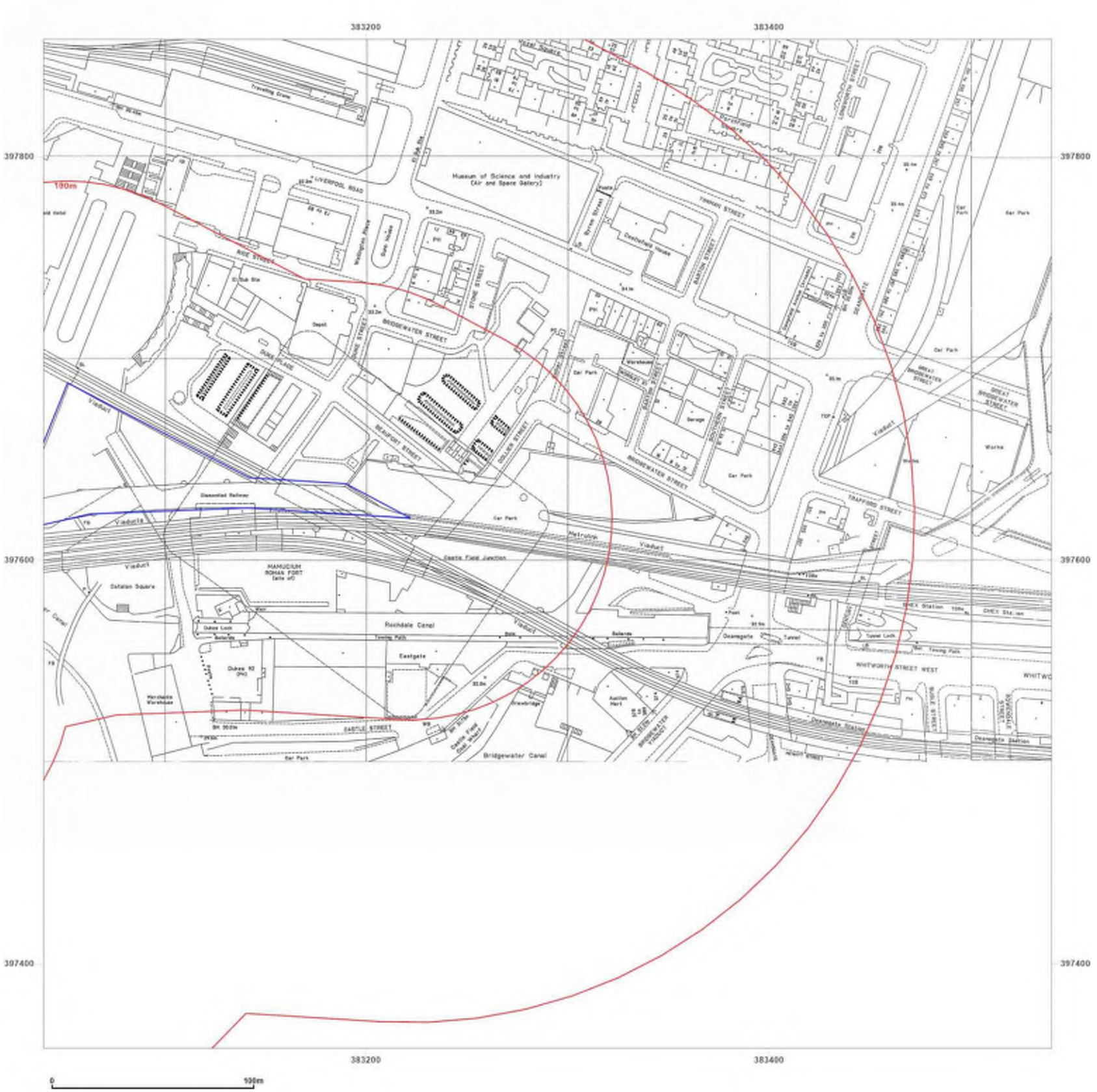
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Groundsure INSIGHTS

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Report Ref: GS-7712230_1250_2_1
Grid Ref: 383290, 397608

Map Name: National Grid

Map date: **1995**

Scale: 1:1,250

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Groundsure INSIGHTS

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Report Ref: GS-7712230_1250_2_1
Grid Ref: 383290, 397608

Map Name: National Grid

Map date: **1990-1995**

Scale: 1:1,250

Printed at: 1:2,000

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Appendix

Appendix C – BGS Historical Borehole Logs

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CITY ENGINEER AND SURVEYORS DEPARTMENT

SJ 39 NW 3948
SJ 39 NW 2

SITE INVESTIGATION FOR	DSG	DATE COMMENCED	14.2.86
LOCATION	Castlefield	REF:	BORING METHOD	Shell and Auger
BOREHOLE No.	F	BORING DIAMETER	150mm
GRID REFERENCE		SCALE:	1:50 approx.

DATE	CASING DEPTH (m)	WATER LEVEL (MORNING & EVENING)	DEPTH OF STRATA BELOW G.L.	Reduced Level	DESCRIPTION	No. and Type of Sample	SAMPLE DEPTH PENETRATION From	To	No. of Blows	Legend
			0.15		Sette					
			1.20		Ashes, stones, sand, brick pieces etc. Made Ground	B1	0.5			
					Very dense orange fine/medium grained SANDSTONE	P2	1.3	1.31	80	
						P3	2.0	2.05	50	
						P4	3.0	3.05	50	
14.2.86			3.00							

WATER OBSERVATIONS DURING BORING

DEPTH OF WATER ENTRY (m)	ESTIMATED SEEPAGE	STANDING LEVEL (m)	DEPTH OF CASING WHEN SEALED (m)

WATER LEVEL IN CASED/UNCASED BOREHOLE ON COMPLETION

DATE	WATER LEVEL	DEPTH OF CASING

REMARKS:-

SAMPLE TEST KEY

D – DISTURBED SAMPLE
P – SPT SAMPLE
B – BULK SAMPLE
W – WATER SAMPLE
U – UNDISTURBED SAMPLE

NOTE: WHERE FULL 0.3 PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN INSTEAD OF N – VALUE!

ALL DEPTHS AND REDUCED LEVELS IN (m) UNLESS OTHERWISE STATED

REMARKS

SPT sample P2 recorded 80 blows for 114mm penetration within the initial 150mm penetration.
SPT sample P3 recorded 50 blows for 64mm penetration within the initial 150mm penetration.
SPT sample P4 recorded 50 blows for 50mm penetration within the initial 150mm penetration.

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CITY ENGINEER AND SURVEYORS DEPARTMENT

SITE INVESTIGATION FOR: DSG — DATE COMMENCED: 17.2.86

LOCATION: Castlefields — REF: — BORING METHOD: Shell and Auger

BOREHOLE No.: C — BORING DIAMETER: 150mm

GRID REFERENCE — SCALE: 1:50

DATE	CASING DEPTH (m)	WATER LEVEL MORNING & EVENING	DEPTH OF STRATA BELOW G.L.	Reduced Level	DESCRIPTION	No. and Type of Sample	SAMPLE DEPTH PENETRATION From	To	No. of Blows	Legend
					Ashes, cinders, clay, sand brick pieces etc.	D1	0.5			
						P2	1.15	1.45	7	
					Made Ground	B3	1.0	2.0		
						P4	2.15	2.45	20	
						S5	2.5	5.0		
			2.60							
			3.20		Very dense clayey and gravelly fine/medium grained SAND.	P6	3.15	3.374	82	
172.66	3.60	2.90	3.60		Very dense fine/medium grained SANDSTONE	W7	2.90			
						P8	3.6	3.675	50	

WATER OBSERVATIONS DURING BORING

DEPTH OF WATER ENTRY (m)	ESTIMATED SEEPAGE	STANDING LEVEL (m)	DEPTH OF CASING WHEN SEALED (m)
3.0	Slow	2.90	

WATER LEVEL IN CASED/UNCASED BOREHOLE ON COMPLETION

DATE	WATER LEVEL	DEPTH OF CASING
17.2.86	2.90	Nil

REMARKS:-

SAMPLE TEST KEY: C – DISTURBED SAMPLE; B – BULK SAMPLE; U – UNDISTURBED SAMPLE; P – SPT SAMPLE; W – WATER SAMPLE

NOTE: WHERE FULL 0.3 PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN AND 'R' = 'VALUE'

ALL DEPTHS AND REDUCED LEVELS IN (m) UNLESS OTHERWISE STATED

REMARKS

SPT Sample P6 recorded 82 blows for 229mm penetration.
SPT Sample P8 recorded 50 blows for 75mm penetration within the initial 75mm penetration

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5389 — 3420
6304 1992

SITE INVESTIGATION FOR	DSS	DATE COMMENCED	17.2.86.
LOCATION	Castlefields	REF:	BORING METHOD	Shell and Auger
BOREHOLE No.	3	BORING DIAMETER	150 mm
GRID REFERENCE		SCALE:	1:50 approx.

DATE	CASING DEPTH (m)	WATER LEVEL MORNING & EVENING	DEPTH OF STRATA BELOW O.D.	Ground Level	DESCRIPTION	No. and Type of Sample	SAMPLE DEPTH PENETRATION From	To	No. of Blows	Legend
			0.46		Concrete and gotts					
					Very dense red brown fine/medium grained SANDSTONE	P1	0.5	0.65	72	
						P2	1.5	1.575	50	
						P3	2.5	2.58	50	
17.2.86	1.40	Dry	2.50							

WATER OBSERVATIONS DURING BORING

DEPTH OF WATER ENTRY (m)	ESTIMATED SEEPAGE	STANDING LEVEL (m)	DEPTH OF CASING WHEN SEALED (m)
None			
OBSERVING			

WATER LEVEL IN CASED/UNCASED BOREHOLE ON COMPLETION

DATE	WATER LEVEL	DEPTH OF CASING

REMARKS :-

SAMPLE TEST KEY

D = DISTURBED SAMPLE B = BULK SAMPLE U = UNDISTURBED SAMPLE
P = SPT SAMPLE W = WATER SAMPLE

NOTE: WHERE FULL 50 PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT W = VALUE)

ALL DEPTHS AND REDUCED LEVELS IN mm UNLESS OTHERWISE STATED

REMARKS

SPT sample P1 recorded 72 blows for 150 mm penetration within the initial 150mm penetration.
SPT sample P2 recorded 50 blows for 75 mm penetration within the initial 150mm penetration.
SPT sample P3 recorded 50 " " 50 mm " " " " " "

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SJ 8611 9964

SITE INVESTIGATION FOR	DSG	DATE COMMENCED	18.2.86
LOCATION Castlefield	REF:	BORING METHOD	Shell and Auger
BOREHOLE No. K		BORING DIAMETER	150mm
GRID REFERENCE		SCALE:	1:50

DATE	CASING DEPTH (m)	WATER LEVEL MORNING & EVENING	DEPTH OF STRATA BELOW GL	Reduced Level	DESCRIPTION	No. and Type of Sample	SAMPLE DEPTH PENETRATION From	To	No. of Blows	Legend
			0.20		Grass					
			0.35		Ashes					
			2.75		Sand, gravel, ashes, brick pieces etc. - made ground	D1	0.5			
			3.00		Loose orange brown fine/medium grained SAND with clay lenses	D2 P3 P4 B5	0.8 1.35 2.15 2.0	1.65 2.45 3.0	5 5	
			4.2		loose to very loose SAND and GRAVEL with clay lenses	P6 B7 P8	3.15 3.5 4.35	3.45 4.2 4.65	7 1	
			5.85		Very clayey and silty fine/ medium SAND with occasional gravel	P5	5.65	5.95	70	
18.2.86		Dry	6.0		Very dense red brown fine/ medium SANDSTONE					

WATER OBSERVATIONS DURING BORING

DEPTH OF WATER ENTRY (m)	ESTIMATED SEEPAGE	STANDING LEVEL (m)	DEPTH OF CASING WHEN SEALED (m)
None Observed			

WATER LEVEL IN CASED/UNCASED BOREHOLE ON COMPLETION

DATE	WATER LEVEL	DEPTH OF CASING

REMARKS:-

SAMPLE TEST KEY

D - DISTURBED SAMPLE B - BULK SAMPLE U - UNDISTURBED SAMPLE
P - SPT SAMPLE W - WATER SAMPLE

NOTE: WHERE FULL 0.3 PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN UNDER N VALUE

ALL DEPTHS AND REDUCED LEVELS IN m UNLESS OTHERWISE STATED

REMARKS

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SJE 9/2/87 3763
9/2/87 9779

SITE INVESTIGATION FOR	[illegible]	DATE COMMENCED	2.2.87.
LOCATION	DUKE PLACE	BORING METHOD	CABLE PERCUSSIVE
BOREHOLE No	5	BORING DIAMETER	150 mm
GRID REFERENCE		SCALE:	1:50 (approx.)

DATE	CASING DEPTH (m)	WATER LEVEL MORNING & EVENING	DEPTH OF STRATA BELOW O.D.	Reduced Level	DESCRIPTION	No. and Type of Sample	SAMPLE DEPTH PENETRATION From	To	No. of Blows	Legend
			0.50		Concrete					
					Very dense red brown fine to medium SAND (weathered SANDSTONE)	P1	0.85	0.87	50	
						P2	1.20	1.27	50	
2.2.87.	0.00	Dry	2.05		END OF BOREHOLE	P3	2.00	2.05	50	

WATER OBSERVATIONS DURING BORING				WATER LEVEL IN CASED/UNCASED BOREHOLE ON COMPLETION			
DEPTH OF WATER ENTRY (m)	ESTIMATED SEEPAGE	STANDING LEVEL (m)	DEPTH OF CASING WHEN SEALED (m)	DATE	WATER LEVEL	DEPTH OF CASING	
None							
Dry							

REMARKS:-

SAMPLE TESTS KEY

D – DISTURBED SAMPLE B – BULK SAMPLE U – UNDISTURBED SAMPLE
P – SPT SAMPLE W – WATER SAMPLE

NOTE: WHERE FULL 0.3 PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN INSTEAD – VALUE.

ALL DEPTHS AND REDUCED LEVELS IN (m) UNLESS OTHERWISE STATED

REMARKS

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SHEET 1 OF 1
SHEET 1 OF 1

SITE INVESTIGATION FOR	1986	DATE COMMENCED	28.1.87
LOCATION	ARCHAEOLOGICAL EXCAVATION	BORING METHOD	CABLE PERCUSSIVE
BOREHOLE No.	A	BORING DIAMETER	150mm
GRID REFERENCE		SCALE:	1:50 (approx)

DATE	CASING DEPTH (m)	WATER LEVEL MORNING & EVENING	DEPTH OF STRATA BELOW O.D.	REDUCED LEVEL	DESCRIPTION	No. and Type of Sample	SAMPLE DEPTH PENETRATION From	To	No. of Blows	Legend
					MADEGROUND					
			1.80							
					Medium - dense gravel					
			3.40							
					Stiff silty CLAY					
			5.30							
			5.60		Silty SAND (wet)					
			5.90		Stiff silty CLAY					
28-1-87	4.60		6.05		Dense red SANDSTONE end of borehole	D1	5.90	6.05	50	

WATER OBSERVATIONS DURING BORING			
DEPTH OF WATER ENTRY (m)	ESTIMATED SEEPAGE	STANDING LEVEL (m)	DEPTH OF CASING WHEN SEALED (m)
5.30	Slow		not sealed

WATER LEVEL IN CASED/UNCASED BOREHOLE ON COMPLETION		
DATE	WATER LEVEL	DEPTH OF CASING
29-1-87	3.80m	4.60m

REMARKS:-

SAMPLE TEST KEY

C = DISTURBED SAMPLE
P = SPT SAMPLE
B = BULK SAMPLE
W = WATER SAMPLE
U = UNDISTURBED SAMPLE

NOTE: WHERE FULL 300 PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N - VALUE)

ALL DEPTHS AND REDUCED LEVELS IN (m) UNLESS OTHERWISE STATED

REMARKS

MS 5831

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S369 – 3467
X83 1769

SITE INVESTIGATION FOR DSC — DATE COMMENCED 29.1.87

LOCATION ARCHAEOLOGICAL EXCAVATION — BORING METHOD CABLE PERCUSSIVE

BOREHOLE No A — BORING DIAMETER 150mm

GRID REFERENCE — SCALE: 1:50 (approx.)

DATE	CASING DEPTH (m)	WATER LEVEL MORNING & EVENING	DEPTH OF STRATA BELOW OL	Reduced Level	DESCRIPTION	No. and Type of Sample	SAMPLE DEPTH PENETRATION From	To	No. of Blows	Legend
					MADEGROUND					
			2.90		Medium - dense GRAVEL					
			4.00		Stiff laminated silty CLAY with sand bands					
			5.00			D1	5.00			
			5.20		SAND (wet)					
			6.10		Stiff silty CLAY					
			6.20		Dense red SANDSTONE	P1	6.20	6.20	78	

WATER OBSERVATIONS DURING BORING

DEPTH OF WATER ENTRY (m)	ESTIMATED SEEPAGE	STANDING LEVEL (m)	DEPTH OF CASING WHEN SEALED (m)
5.20	slow	5.00	5.50

WATER LEVEL IN CASED/UNCASED BOREHOLE ON COMPLETION

DATE	WATER LEVEL	DEPTH OF CASING
29.1.87	5.00m	5.50m

REMARKS –

SAMPLE TEST KEY: D = DISTURBED SAMPLE; B = BULK SAMPLE; U = UNDISTURBED SAMPLE; P = SPT SAMPLE; W = WATER SAMPLE

NOTE: WHERE FULL 0.3 PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N – VALUE)

ALL DEPTHS AND REDUCED LEVELS IN (m) UNLESS OTHERWISE STATED

REMARKS.

S/B 8813

MANCHESTER CITY COUNCIL

CITY ENGINEER AND SURVEYORS DEPARTMENT

SJ89 NW 346

SITE INVESTIGATION FOR	DSC	DATE COMMENCED	29.1.87
LOCATION	ARCHAEOLOGICAL EXCAVATION	BORING METHOD	CABLE PERCUSSIVE
BOREHOLE No.	C	BORING DIAMETER	150mm
GRID REFERENCE		SCALE:	1:50 (approx.)

DATE	CASING DEPTH (m)	WATER LEVEL MORNING & EVENING	DEPTH OF STRATA BELOW G.L.	Reduced Level	DESCRIPTION	No. and Type of Sample	SAMPLE DEPTH PENETRATION From	SAMPLE DEPTH PENETRATION To	No. of Blows	Legend
					CLAY, ash, sandstone pieces etc. MADE GROUND					
			3.10		Medium - dense GRAVEL					
			3.90		Stiff laminated silty CLAY					
			5.30			U1	5.30			
			5.40		SAND (wet)					
			6.10		Stiff silty CLAY					
30.1.87	4.60	5.30	6.25		Dense red SANDSTONE	P1	6.10	6.25	50	
					End of BOREHOLE					

WATER OBSERVATIONS DURING BORING

DEPTH OF WATER ENTRY (m)	ESTIMATED SEEPAGE	STANDING LEVEL (m)	DEPTH OF CASING WHEN SEALED (m)
5.30	slow	5.30	not sealed

WATER LEVEL IN CASED/UNCASED BOREHOLE ON COMPLETION

DATE	WATER LEVEL	DEPTH OF CASING
29.1.87	5.30m	6.60m
30.1.87	4.60m	6.60m

REMARKS:-

SAMPLE TEST KEY

D - DISTURBED SAMPLE
P - SPT SAMPLE
B - BULK SAMPLE
W - WATER SAMPLE
U - UNDISTURBED SAMPLE

NOTE: WHERE FULL 0.3 PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N - VALUE)

ALL DEPTHS AND REDUCED LEVELS IN (m) UNLESS OTHERWISE STATED

REMARKS

MCC BH01

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CITY ENGINEER AND SURVEYORS DEPARTMENT

SJ 8497 N 3468
SJ 8496 3396

SITE INVESTIGATION FOR: SBD — DATE COMMENCED: 29.1.87

LOCATION: Archaeological Excavation — BORING METHOD: Cable Percussive

BOREHOLE No.: 9 — BORING DIAMETER: 150mm

GRID REFERENCE: — SCALE: 1:50 (approx)

DATE	CASING DEPTH (m)	WATER LEVEL MORNING & EVENING	DEPTH OF STRATA BELOW GL	RESTORED LEVEL	DESCRIPTION	SPT and Type of Sample	SAMPLE DEPTH PENETRATION From	To	No. of Blows	LEGEND
					MADE GROUND					
			3.80							
			4.00		GRAVEL					
			4.60		Stiff brown gravelly CLAY					
			5.60		Stiff laminated silty CLAY	WL	5.00			
			5.90		SAND (wet)					
			6.00		Stiff silty CLAY					
29.1.87	4.60		6.15		Dense red SANDSTONE	P1	6.00	6.27	60	
					END OF BOREHOLE					

WATER OBSERVATIONS DURING BORING

DEPTH OF WATER ENTRY (m)	ESTIMATED SEEPAGE	STANDING LEVEL (m)	DEPTH OF CASING WHEN SEALED (m)
5.00	SLOW	3.90	Not Sealed

WATER LEVEL IN CASED/UNCASED BOREHOLE ON COMPLETION

DATE	WATER LEVEL	DEPTH OF CASING
30.1.87	3.90m	4.60m

REMARKS:-

SAMPLE TEST KEY

D – DISTURBED SAMPLE — B – BULK SAMPLE — U – UNDISTURBED SAMPLE
P – SPT SAMPLE — W – WATER SAMPLE

NOTE: WHERE FULL 0.3 PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (NOT N – VALUE)

ALL DEPTHS AND REDUCED LEVELS in (m) UNLESS OTHERWISE STATED

REMARKS

MX 6921

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CITY ENGINEER AND SURVEYORS DEPARTMENT

SITE INVESTIGATION FOR DSG — DATE COMMENCED 30.1.87

LOCATION ARCHAEOLOGICAL EXCAVATION — BORING METHOD CABLE PERCUSSIVE

BOREHOLE No. E — BORING DIAMETER 150mm

GRID REFERENCE — SCALE: 1:50 (approx)

DATE	CASING DEPTH (m)	WATER LEVEL MORNING & EVENING	DEPTH OF STRATA BELOW GL	Reduced Level	DESCRIPTION	No. and Type of Sample	SAMPLE DEPTH PENETRATION From	To	No. of Blows	Legend
					LOOSE MADEGROUND					
			1.50							
					Loose damp MADEGROUND					
			3.50							
			4.20		medium - dense ash and brick pieces MADEGROUND	W1	3.70			
			5.40		medium-dense SAND and GRAVEL (wet)					
					Stiff silty CLAY					
			5.95							
30.1.87	4.60	3.60	6.10		Dense red SANDSTONE END OF BOREHOLE	P1	5.95	6.10	110	

WATER OBSERVATIONS DURING BORING

DEPTH OF WATER ENTRY (m)	ESTIMATED SEEPAGE	STANDING LEVEL (m)	DEPTH OF CASING WHEN SEALED (m)
4.20	60 GALLS	3.60	CASE SEALED

WATER LEVEL IN CASED/UNCASED BOREHOLE ON COMPLETION

DATE	WATER LEVEL	DEPTH OF CASING
30.1.87	3.60m	4.60m

REMARKS:-

SAMPLE TEST KEY

D - DISTURBED SAMPLE — B - BULK SAMPLE — U - UNDISTURBED SAMPLE

P - SPT SAMPLE — W - WATER SAMPLE

NOTE: WHERE FULL 0.3 PENETRATION HAS NOT BEEN ACHIEVED, THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN NOT N - VALUE

ALL DEPTHS AND REDUCED LEVELS IN (m) UNLESS OTHERWISE STATED

REMARKS

W/C 6051

MANCHESTER CITY COUNCIL

CITY ENGINEER AND SURVEYORS DEPARTMENT

SJ89NW 3469
834 9966

SITE INVESTIGATION FOR DSS — DATE COMMENCED 30.1.87

LOCATION ARCHAEOLOGICAL EXCAVATION — BORING METHOD CABLE PERCUSSION

BOREHOLE No. F — BORING DIAMETER 150mm

GRID REFERENCE — SCALE: 1:50 (approx)

DATE	CASING DEPTH (m)	WATER LEVEL MORNING & EVENING	DEPTH OF STRATA BELOW GL	REDUCED LEVEL	DESCRIPTION	No. and Type of Sample	SAMPLE DEPTH PENETRATION From	To	No. of Blows	REMARKS
			1.90		MADEGROUND					
			2.50		Stiff silty CLAY					
			2.60		Silty SAND					
			3.00		Stiff silty CLAY					
30.1.87	1.60	DRY	3.20		Dense SANDSTONE	P1	3.05	3.20	111	

WATER OBSERVATIONS DURING BORING

DEPTH OF WATER ENTRY (m)	ESTIMATED SEEPAGE	STANDING LEVEL (m)	DEPTH OF CASING WHEN SEALED (m)

WATER LEVEL IN CASED/UNCASED BOREHOLE ON COMPLETION

DATE	WATER LEVEL	DEPTH OF CASING

REMARKS:

SAMPLE TEST KEY

D = DISTURBED SAMPLE — B = BULK SAMPLE — U = UNDISTURBED SAMPLE
P = SPT SAMPLE — W = WATER SAMPLE

NOTE: WHERE FULL 0.3 PENETRATION HAS NOT BEEN ACHIEVED THE NUMBER OF BLOWS FOR THE QUOTED PENETRATION IS GIVEN (EG P = 15/200)

ALL DEPTHS AND REDUCED LEVELS (m OD) UNLESS OTHERWISE STATED

REMARKS

MCE 5021

Appendix

Appendix D – Coal Authority Consultants Coal Mining Report

Royal HaskoningDHV

The Coal Authority

Consultants

Coal Mining Report

Land For Car Park, Potato Wharf,
Manchester, M3 4jr
Greater Manchester

Date of enquiry:	**1 April 2021**
Date enquiry received:	**1 April 2021**
Issue date:	**1 April 2021**
Our reference:	**51002453805001**
Your reference:	**GS-7712200**



Consultants

Coal Mining Report

This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

GROUNDSURE LIMITED

Enquiry address

Land For Car Park, Potato Wharf, Manchester, M3 4jr
Greater Manchester



Approximate position of property

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200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

@coalauthority
/company/the-coal-authority
/thecoalauthority
/thecoalauthority

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Section 1 – Mining activity and geology

Past underground mining
No past mining recorded.

Probable unrecorded shallow workings
None.

Spine roadways at shallow depth
No spine roadway recorded at shallow depth.

Mine entries
None recorded within 100 metres of the enquiry boundary.

Abandoned mine plan catalogue numbers
None available.

Outcrops
No outcrops recorded.

Geological faults, fissures and breaklines
No faults, fissures or breaklines recorded.

Opencast mines
None recorded within 500 metres of the enquiry boundary.

Coal Authority managed tips
None recorded within 500 metres of the enquiry boundary.

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Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations
None recorded within 50 metres of the enquiry boundary.

Remediated sites
None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence
The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

Mine gas
None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes
None recorded within 500 metres of the enquiry boundary.

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Section 3 – Licensing and future mining activity

Future underground mining
None recorded.

Coal mining licensing
None recorded within 200 metres of the enquiry boundary.

Court orders
None recorded.

Section 46 notices
No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

Withdrawal of support notices
The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

Payments to owners of former copyhold land
The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

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Section 4 – Further information

Based on the responses in this report, no further information has been highlighted.

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Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk.**

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

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Opencast mines
Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips
Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations
Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites
Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence
Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas
Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission.

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Mine water treatment schemes
Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining
Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing
Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders
Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices
Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices
Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land
Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

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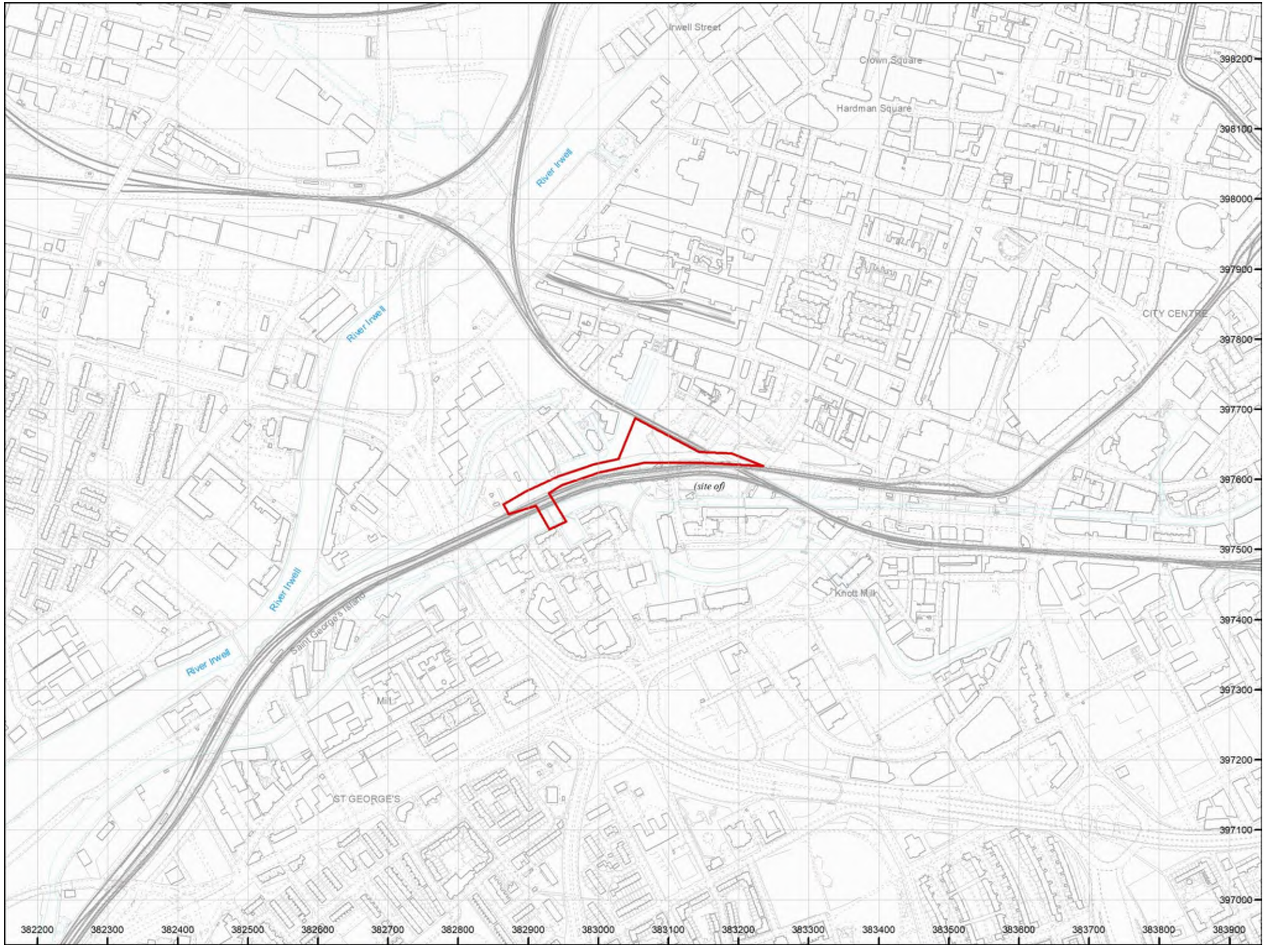
Summary of findings

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The map highlights any specific surface or subsurface features within or near to the boundary of the site.

Key

Approximate position of the enquiry boundary shown



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www.groundstability.com

Appendix

Appendix E – Groundsure Preliminary Unexploded Ordnance Risk Assessment

Royal HaskoningDHV

Preliminary Unexploded Ordnance Risk Assessment





Project: LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

Groundsure Ref: GS-7712199

Report prepared by SafeLane Global and FIND Mapping Limited

Report reference: 504521

SAFE, RELIABLE, PROFESSIONAL
The established market leader in UXO risk mitigation
www.bombrisk.com

Preliminary Unexploded Ordnance Threat Assessment

For:
LAND FOR CAR PARK, POTATO WHARF, MANCHESTER, M3 4JR

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1 Has a potential unexploded ordnance (UXO) risk been identified at the site in question?

YES

Indicative British / Allied UXO Risk	**HIGH**
Indicative German UXO Risk	**MEDIUM**

2 Does the site in question require further research to clarify the unexploded ordnance (UXO) risk to future ground works?

YES

3 SafeLane Global's recommendation:

A Stage 2 Detailed Unexploded Ordnance Desktop Threat Assessment of the site is carried out.

To request a quotation please call SafeLane Global on 01634 471 340

If you order the recommended Stage 2 Detailed Desktop Threat Assessment, you will be refunded the fee for this BombRisk Preliminary Threat Assessment.

About SafeLane Global Limited

Operational for over 30 years for 10,000+ clients, SafeLane Global supports the UK construction industry with its BombRisk service. This assesses the risk of encountering items of unexploded ordnance (UXO) during intrusive works.

Safelane Global's specialist advice provides essential information for risk assessments, improving safety and enhancing reputations, helping contractors avoid costly delays.

SafeLane Global holds the following accreditations:

- **Occupational Health & Safety Management Systems (OHAS 18001:2007)**
- **Environmental Management Systems (ISO 14001:2004)**
- **Quality Management Systems (ISO 9001:2008).**

The risk of encountering UXO on most sites in the UK is low. However, where a site is at increased risk it is necessary to take measures to mitigate that risk. The factors affecting UXO risk assessment are based upon the history and previous usage of a site and its surroundings.

In 2009, the Construction Industry Research and Information Association (CIRIA) established a set of guidelines to assist industry professionals; SafeLane Global was a significant contributor to the guide, under former company name Dynasafe BACTEC.

CIRIA recommends a four-stage risk management process:

- **Preliminary risk assessment**
- **Detailed risk assessment**
- **Risk mitigation**
- **Implementation**

The preliminary risk assessment enables a non-UXO specialist to place a site in context and to identify whether a more detailed assessment is necessary. The assessment is based upon data obtained from desktop reviews of the site's history and its proximity to potential indicators of UXO contamination.

There are two principal groups of onshore UXO in the UK:

- **British / Allied army, air force and navy activities - domestic military activity**
- **Enemy bombing during WWI and WWII - aerial bombing and naval bombardment**

These two groups comprise many potential UXO risk contributing sources within the UK, the most significant of which are listed below. Georeferenced databases containing this information are used

by BombRisk.com to identify areas of potentially elevated UXO risk.

- **Historic army, navy and air-force facilities**
- **Explosives / ammunition factories**
- **Munitions storage depots**
- **Historic military training areas and firing ranges**
- **British army explosive ordnance clearance tasks / recces**
- **WWII heavy anti-aircraft batteries**
- **WWII anti-invasion defensive fortifications**
- **Miscellaneous WWII pipe mined locations**
- **WWII prisoner of war camps**
- **WWII German bombing density statistics**
- **WWII bombing decoy sites**
- **Press articles regarding UXO finds**
- **Locations of SafeLane Global UXO finds**
- **Locations of SafeLane Global desktop threat assessments**
- **Locations of SafeLane Global on-site support services**

About FIND Mapping Limited

Established in 2006, FIND Mapping Limited is a pioneering web mapping and spatial data technology company offering online mapping and consultancy services. FIND technology powers the generation of this report.

www.findmaps.co.uk provides detailed mapping and a wealth of data sets to hundreds of the UK's top property, environmental and design/build companies.

FIND's consultancy services provide bespoke internet mapping solutions to a range of businesses enabling them to manage their spatial data more effectively.

While working closely with a wide range of reputable data providers including Ordnance Survey and the Environment Agency, FIND works independently of these organisations. A similar arm's-length relationship is maintained in terms of software and hardware providers. This enables the team at FIND to offer truly independent advice.

SafeLane Global Limited and FIND have compiled a geo-referenced database of potential sources of UXO risk within the UK. From this information a range of risk zones have been defined.

The weighting of these zones is based upon the influence of all relevant factors. A WWII-era RAF airfield, for example, has a far greater zone of influence than a single WWII-era anti-aircraft battery, as it would have covered a larger area, housed a much greater quantity / variety of munitions, seen more domestic troop training activities and would have been a more likely target for enemy bombers.

An online Preliminary Automated UXO Threat Assessment will determine an indicative level of UXO risk relating to a site. Note that these risk levels could be subject to change following the completion of any Detailed Desktop Threat Assessment for the same site.

The assessment will list all factors contributing to this weighting and will also give appropriate recommendations for further action, if considered necessary.

SafeLane Global Limited's UXO Source Database

Within 10km of the site the following potential sources of explosive ordnance have been recorded:

Source	Number within 10km
Military Airfield Sites	1
Bombing Decoy Sites	3
Abandoned Bombs	5
Press Articles Regarding UXO Finds	7
WWII Defence Related Positions & Pillboxes	12
Historic Army Camps	4
Prisoner of War Camps	1
Heavy Anti-Aircraft Batteries	29
Army Explosive Ordnance Clearance Tasks/Recces	4
Sites Related to the Manufacture of Explosives and Explosive Ordnance	7
SafeLane Global Desk-top Threat Assessments	13
Military Training Areas and Firing Ranges	None recorded
Pipe Mined WWII Airfields	None recorded
Miscellaneous WWII Pipe Mined Locations	None recorded
SafeLane Global Unexploded Ordnance Finds	None recorded
SafeLane Global On-Site Support Services	None recorded

Of these sources, the following are deemed the most significant:

Sites Related to the Manufacture of Explosives and Explosive Ordnance

Facility Name	Approximate distance (km) from site
Dugdale Everton and Co, Bridgewater House, Whitworth Street, Manchester, Great War, cotton waste works (Precise location unknown	0.4

During both WWI and WWII many factories were established (or existing sites converted) to produce explosives and/or fill ordnance with explosive and chemical constituents. These ranged from small engineering works to large national filling factories (WWI) and royal ordnance factories (WWII). The site of the proposed works lies in the vicinity of one of these facilities.

For a factory producing casings, for example, the associated risk is negligible. However, on sites handling or producing explosive and chemical weapons the risk of soil contamination can be high.

Disposal areas (often on site boundaries) can pose considerable risk. The history of the facility should be more fully researched.

Press Articles Regarding UXO Finds

Description	Article Id	Approximate distance from site	Article Appendix
Poss WWII bomb on site in Middlewood Street	PA023	0.7	Click here to view article
UX Mortar, Building site Cambridge St, off Oxford Road, Manchester	PA206	1	Click here to view article

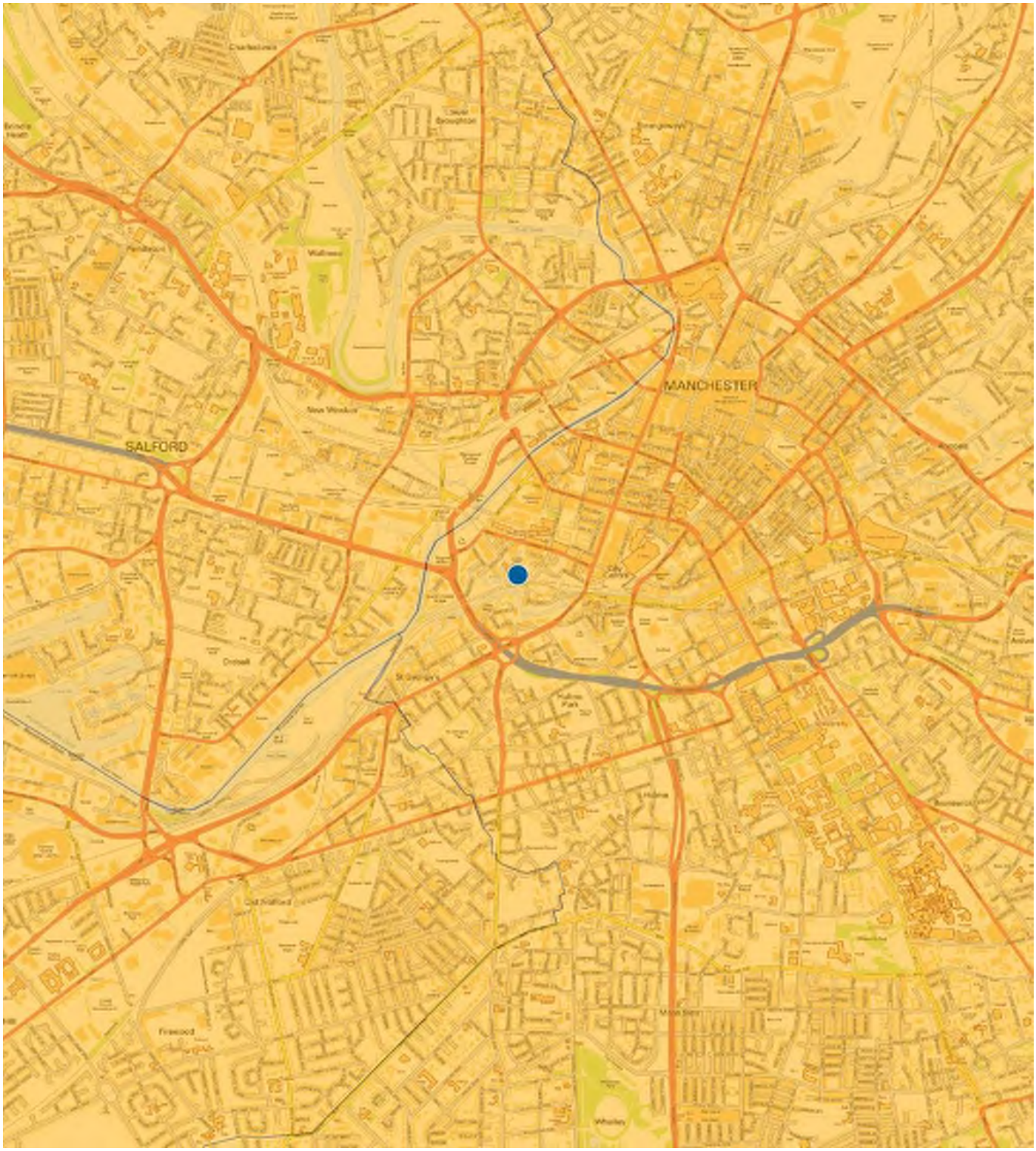
SafeLane Global has compiled a database of press articles relating to unexploded ordnance finds in the UK. The site is close to an incident where an item of unexploded ordnance was discovered.

Quite often items of unexploded ordnance do not exist in isolation. The discovery of one or a cache of items often indicates the presence of additional items. It is recommended that further details about the incident be obtained.

SafeLane Global On-Site Support Services

Reference	Approximate distance (km) from site
9851	0.4

SafeLane Global has provided on-site support to many hundreds of sites in the UK involving search and clear operations, EOD Engineer support and both intrusive and non-intrusive magnetometry surveys.



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NEGLIGIBLE
LOW
MEDIUM
HIGH

1:20000

0 400 800
Metres

Risk Levels and Recommendation

Indicative British / Allied UXO Risk

HIGH

There are significant potential sources of British / Allied UXO recorded in SafeLane Global's historical database in proximity to the site. It is recommended that further research is undertaken to determine more about these sources and to what degree they may have affected the site. Given the proximity and significance of these sources, the risk on site from UXO is considered to be High.

Indicative German UXO Risk

MEDIUM

Historical records indicate a medium level of bombing density across the borough in which the site was situated during WWII.

More research should be undertaken to identify whether the site itself was bombed or damaged during WWII.

This preliminary assessment has identified a medium risk from German unexploded bombs at this site.

Conclusion

This preliminary assessment has resulted in an overall High risk from UXO. SafeLane Global would recommend that a Detailed UXO Threat Assessment Desk Top Study is undertaken for this site. Detailed assessments are conducted offline by SafeLane Global's researchers and use information such as historical mapping, WWII-era aerial photography, written air-raid precaution records and where necessary local archive research to fully qualify the risk on site. Land use, changes to building layout during WWII and post war redevelopment will also have an impact on any remaining level of risk from UXO. It is often possible to zone sites into different risk categories. The lead time for a detailed assessment will vary between 3-10 working days dependent upon the complexity of the site and the additional site specific information required.

For a quotation, or more information, please contact SafeLane Global's research team on 01634 471 340, or at research@safelaneglobal.com

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Appendix

Appendix F – Qualitative Human Health and Environmental Risk Assessment Methodology

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Qualitative Methodology

The risk assessment considers the sources and potential receptors identified, together with linking pathways. These linkages are summarised in the Preliminary Conceptual Site Model and Qualitative Risk Assessment within the report, where the associated environmental risk is assessed for a given source and the end-use of the site. This assessment also takes account of specific chemicals of concern or groups of similar chemicals of concern. The column designated as 'Potential Consequence of Source- Pathway – Receptor-Linkage' in the Preliminary Conceptual Site Model and Qualitative Risk Assessment gives an indication of the sensitivity of a given receptor to a particular source/chemical of concern being considered. It is a worst case classification and is based on full exposure via the particular linkage being examined. The derivation of the classes used to rank this particular aspect is as follows based on CIRIA 552 'Contaminated Land Risk Assessment, A Guide to Good Practice' 2001:

Classification	Human Health	Controlled Water	Ecological	Built Environment	Amenity
Severe	Acute risk to human health likely to result in 'significant harm' as defined by the Environmental Protection Act 1990, Part 2A	Substantial pollution of sensitive water resources	Significant change to the number of one or more species or ecosystems	Catastrophic damage to buildings, structures or the environment	Irreversible damage to human health
Moderate	Chronic damage to human health ('significant harm').	Pollution of sensitive water resources	Change to population densities of non-sensitive species	Damage to sensitive buildings, structures or the environment	Non-permanent health effects to humans
Mild	Harm but not necessarily significant harm to humans	Pollution to non-sensitive water resources	Some change to population densities but with no negative effects on the function of the ecosystem	Easily repairable effects of damage to buildings or structures	Slight short term health effects to humans
Minor	Harm but not necessarily significant harm to humans which can easily be prevented with the use of PPE.	Slight pollution to non-sensitive water resources	No significant changes to population densities in the environment or in any ecosystem	Very slight non-structural damage or cosmetic harm to buildings or structures	No measurable effects on humans

Subsequently, in the column designated 'Likelihood of PCL, an assessment is made of the probability of the selected source and receptor being linked by the identified pathway. This assessment is ranked based on-site specific conditions as follows:

Classification of probability	Definition
High likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution
Likely	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term
Low likelihood	There is a pollution linkage and circumstances are possible under which an even could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term
Unlikely	There is a pollution linkage, but circumstances are such that it is improbable that an event would occur in the very long term

The ‘Risk Classification’ column is an overall assessment of the actual risk, which considers the likely consequence of a given risk being realised and the likelihood of that risk being realised. The risk classifications are assigned using the following consequence/likelihood matrix:

Matrix				
Severe	Moderate to low	Moderate	High	Very High
Medium	Low	Moderate to Low	Moderate	High
Mild	Very Low	Low	Moderate to Low	Moderate
Minor	Very Low	Very Low	Low	Moderate to Low
Likelihood	**Unlikely**	**Low likelihood**	**Likely**	**High likelihood**

Overall risks are described as follows:

Very Low	The presence of the identified source does not give rise to the potential to cause unacceptable harm.
Low	It is possible that harm could arise to a designated receptor from an identified source, however, this is unlikely to be unacceptable.
Moderate	It is possible that harm could arise to a designated receptor from an identified source, but it is likely that such harm would be relatively localised or non-permanent - remedial action may be necessary.
High	A designated receptor is likely to experience unacceptable harm from an identified source without remedial action.
Very High	There is a high probability that severe unacceptable harm could arise to a designated receptor from an identified source without appropriate remedial action.

In cases of physical features, such as foundations and underground services, harm is defined as impact which would result in non-serviceability of the identified receptor or extra over build costs associated with redevelopment.

Appendix

Appendix G - Limitations

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Limitations

The direct assessments and judgements given in this report are limited by both the finite data on which they are based and the proposed works to which they are addressed. The acquisition of data is constrained by both physical and economic factors and, by definition, is subject to limitations. Conditions at the site will change over time due to natural variations and may be affected by human activities.

This document has been prepared for the titled project and should not be relied upon or used for any other project. Royal HaskoningDHV accepts no responsibility or liability for the consequences of this document being used for a purpose other than that purpose for which it was commissioned. The assessments and judgements contained herein should not be relied upon as legal opinion.

The findings and opinions are relevant to the dates of the information reviewed and should not be relied upon to represent conditions at later dates. The opinions included herein are based on the information obtained from the assessments undertaken in the study area and from the experience of the reviewers.

This Phase I Land Quality Assessment has utilised a variety of publicly available data sources such as the Environment Agency, Groundsure, historical maps and the British Geological Survey. Therefore, the study is limited by the age and limitations inherent in the data described.

REPORT

Castlefield Viaduct, Manchester

Land Quality Interpretative Ground Investigation and Generic Quantitative Risk Assessment Report

Client: National Trust

Reference: PC2387-RHD-ZZ-XX-RP-Z-0009

Status: S0/P01.01

Date: 13 August 2021

Royal HaskoningDHV

Enhancing Society Together

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Document title: Castlefield Viaduct, Manchester

Document short title:
Reference: PC2387-RHD-ZZ-XX-RP-Z-0009
Status: P01.01/S0
Date: 13 August 2021
Project name: Castlefield Viaduct
Project number: PC2387
Author(s): Kari Dennis & Punit Patel

Drafted by: Kari Dennis & Punit Patel

Checked by: Caroline Martin

Date: 10th August 2021

Approved by: Jamie Gardiner

Date: 13th August 2021

Classification
Project related

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Royal HaskoningDHV

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Royal HaskoningDHV

Executive Summary

Royal HaskoningDHV has been commissioned by the National Trust (the Trust) to undertake a ground investigation and assessment of Castlefield Viaduct, Manchester. The assessment will inform proposals to repurpose the historic viaduct structure into an elevated park with an integrated active travel hub.

The Trust's vision is for the urban park to be utilised in a variety of ways, ranging from exhibitions, fruit and vegetable growing, sculptures, workspace, onward travel information, community meeting and green space. A Phase 1 Pilot Scheme 'micro park' will be delivered on the eastern section of the viaduct, for a 12-week period in the summer of 2021. The temporary scheme will be undertaken to test the design possibilities and opportunities at the viaduct and generate momentum and support for the proposed scheme.

The railway is recorded as being dismantled in the late 1960s. The land underlying the viaduct was historically occupied by a roman fort, timber wharf, canal network and warehouses. The area surrounding the site has a long industrial history including use as railways, quaysides, wharfs, garages, gravel and sand pits, dye works, chemical works, paper mills, gas works and an abattoir.

The principal objective of the works was to evaluate the suitability of the site for the proposed elevated park. The works included an intrusive ground investigation, comprising a total of 10 hand dug pits, was undertaken by Royal HaskoningDHV on the 8th July 2021. The investigation included the collection of soil, paint scrapings and a surface water sample for laboratory analysis.

In order to evaluate potential risk to human health and controlled waters, soil, paint scrapings and soil-derived leachate analytical data were compared with pertinent Generic Assessment Criteria (GACs). To assess risks to controlled waters (surface waters) data was compared with Environmental Quality Standards (EQSs).

Based on the findings of the ground investigation and subsequent assessment detailed herein, the site soils potentially pose an unacceptable risk to site users, construction/maintenance workers and (if installed) potable water supply pipes. Paint scrapings indicate concentrations of metals that may pose an unacceptable risk to maintenance and construction workers.

Exceedances of the EQS for copper, zinc, lead, fluoranthene and benzo(a)pyrene were recorded. It was determined that lead, fluoranthene and benzo(a)pyrene have the potential to leach at concentrations which may pose an unacceptable risk to surface waters irrespective of development proposals.

Mitigation is required to reduce the risk and possible measures include covering of the ground with temporary boarding, or similar, removal of ballast and soil or processing of the ballast to remove the soil matrix, refurbishment of the drainage network, installation of new potable pipework and raised planting beds.

A remediation strategy and options appraisal should be completed to support the future redevelopment of the site.

1 Introduction

Royal HaskoningDHV was appointed by the National Trust (the Trust) to undertake a ground investigation and assessment for the proposed redevelopment of Castlefield Viaduct, Manchester, centred at Ordnance Survey (OS) Grid Reference 383005 Easting 397626 Northing (herein referred to as the 'site'). This assessment will inform proposals to develop the historic viaduct structure into an elevated urban park with integrated active travel hub. A site location plan is provided in Figure 1.1, at the end of this report.

This report should be read in conjunction with the Royal HaskoningDHV Castlefield Viaduct, Manchester Land Quality Desk Study and Preliminary Risk Assessment Report (Royal HaskoningDHV, 2021).

1.1 Description of the Proposed Scheme

Castlefield Viaduct is an unused, 330m long, historic structure in the heart of Manchester. The Trust wishes to bring the viaduct back into use by repurposing the structure into an elevated urban park and integrated active travel hub. The Trust's vision is for the urban park to be utilised in a variety of ways, ranging from exhibitions, fruit and vegetable growing, sculptures, workspace, onward travel information, community meeting and green space.

A Phase 1 Pilot Scheme 'micro park' will be delivered on the eastern section of the viaduct, for a 12-week period in the summer of 2021. The temporary scheme will be undertaken to test the design possibilities and opportunities at the viaduct, generate momentum and support for the permanent scheme. The temporary scheme will comprise the use of the viaduct as a 'micro park' for community events and organised walking tours. An architectural narrative booklet has been produced for the scheme, referred to as the Castlefield Story Book by Twelve Architects, in July 2020. Visualisations included within the booklet indicate the installation of a footpath across parts of the viaduct, the erection of weather shelters and the placement of planting containers.

The Phase 2 'permanent urban park and travel hub scheme' will comprise a permanent development on the viaduct inclusive of food / beverage stands, garden areas, exhibition stalls, seating areas, an events space and toilet facilities.

1.2 Aims and Objectives

The overall aims and objectives of the ground investigation and assessment were as follows:

- Provide information on the current ground conditions of the site with respect to land contamination.
- Refine the Conceptual Site Models (CSMs) and assess potential contaminant linkages associated with the proposed scheme.
- Identify potential unacceptable risks to human health or the environment via a Generic Quantitative Risk Assessment (GQRA).
- Identify potential risks, liabilities and constraints associated with the site and the proposed development.
- Determine if the site is suitable for the proposed scheme with regards to land contamination.
- Provide high level recommendations for further assessment, mitigation or remediation to render the site suitable for use and allow the proposed development to proceed.
- Facilitate and support the planning process.

1.3 Scope of Works

The scope of the investigation and assessment presented herein comprises:

- Intrusive ground investigation.
- A summary of the ground conditions encountered during the ground investigation works undertaken by Royal HaskoningDHV.
- Review the data presented in this report to identify any contaminant linkages that would need to be addressed to permit the safe redevelopment of the site for humans and to controlled waters.
- Complete a human health and controlled waters GQRA utilising soil, soil leachate, ballast leachate and paint laboratory analytical data collected during the ground investigation.
- Use the GQRA findings to refine the CSMs and update potential contaminant linkages, identify the environmental liabilities and how these may affect the proposed redevelopment of the site.
- If required, provide recommendations for further assessment of the environmental conditions of the site and evaluation of environmental risks and liabilities.
- If required, provide high level remedial recommendations to mitigate against the risks associated with the contaminant linkages to render the site suitable for use.

1.4 Legislative Context and Guidance

The key legislation applicable to this work is Part 2A of the Environmental Protection Act 1990.
Part 2A provides a statutory definition of 'Contaminated Land' and sets out the nature of liabilities that can be incurred as a result of contaminated land and groundwater. Contaminated land is defined as "*Any land which appears to the local authority in whose area it is situated to be in such condition, by reason of substances in, on or under the land that:*

a) significant harm is being caused, or there is significant possibility of such harm being caused; or
b) significant pollution of controlled waters is being caused or there is a significant possibility of such pollution being caused."

Central to the regulatory system is a phased risk-based approach, which is used to establish the existence of 'contaminated land'.

The assessment undertaken in accordance with the following good practice and statutory guidance:

- Environment Agency (EA) 'Land Contamination Risk Management Framework' (2021)
- Ministry of Housing, Communities and Local Government 'National Planning Policy Framework' (2019)
- British Standard 'Investigation of Potentially Contaminated Sites – Code of Practice', BS EN 10175:2011+A1:2013
- Defra 'Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance' PB13735 (2012)
- British Standard 'Code of Practice for Ground Investigations' BS 5930:2015
- EA 'Groundwater Protection Position Statements' (2018)
- CIRIA 'Contaminated Land Risk Assessment – A Guide to Good Practice', C552 (2001)

1.5 Sources of Information

The following information sources have been reviewed to inform the assessment:

- Royal HaskoningDHV, Castlefield Viaduct, Manchester Land Quality Desk Study and Preliminary Risk Assessment 2021. Ref PC2387-RHD-ZZ-XX-RP-Z-0002, dated 10th May 2021

2 Site Setting

2.1 Site Location and Description

Castlefield Viaduct is a Victorian railway viaduct built in 1893, located in Castlefield within Manchester City Centre. It is located approximately 200 metres (m) west of Deansgate-Castlefield Tram Station, which services the Metrolink light rail system and approximately 400 m west of Deansgate Train Station which services the trains. The viaduct is owned by the Department for Transport and is currently disused.

The viaduct is linear in shape, approximately 330 m in length and approximately 14m wide, comprising eight spans. The viaduct is raised off the ground by approximately 16m. It is constructed predominantly of wrought iron / steel and has decorative castellations along its length. Behind the castellations are bearing plates that support the end posts of 16 trusses, the longest of which reaches 53m. The viaduct is a Grade II listed structure.

The top of the viaduct is accessed by foot from Deansgate-Castlefield car park via a locked gate on the eastern site boundary. Vehicular access to the Deansgate-Castlefield car park is made via a ramp off Albion Street. The ground surface of the car park is approximately 0.5 m higher in elevation than the viaduct surface and there is a step down to the viaduct at the gate. There is no vehicular access onto the viaduct. Access is prevented by a vehicle restraint system (VRS) barrier present along the eastern site boundary shared with Deansgate-Castlefield car park.

Historically, three railway tracks ran across the viaduct carrying trains in and out of Manchester Central Station (now known as Manchester Central convention complex). Today, the railway tracks are no longer evident, as the surface of the viaduct is covered by a layer of railway ballast and vegetation.

The land below the viaduct is occupied by land parcels, roads, canals (Rochdale Canal and Bridgewater Canal) and a railway line.

A site layout plan is provided in Figure 2.1, at the end of this report.

2.2 Description of the Site Surroundings

The viaduct is located within a mixed-use setting, land uses adjacent to the site are summarised in Table 2-1 below.

Table 2-1: Current Surrounding Site Uses

Direction	Description
North	Immediately to the north of the western half of the viaduct is Potato Wharf and the Bridgewater Canal and basins. Beyond Potato Wharf are blocks of residential flats (10 m from the northern site boundary) and a construction site. Giant's Basin is located immediately north of the centre of the site with a YHA youth hostel present on its bank, approximately 60 m from the northern site boundary. Beyond the youth hostel is a railway line, orientated in a south-east to north-west direction. The railway line is located approximately 280 m north of the western half of the site and travels directly under the viaduct in the eastern part of the site. To the north of the eastern half of the site is the Bridgewater Canal Tow Path, Castle Street, the railway line and an events area, referred to as the Castlefield Bowl (50 m from the northern site boundary). To the north of the easterly end of the viaduct are Duke Street, grassed areas, the

Direction	Description
	Castlefield Urban Heritage Park and Beaufort Street (40 m from the north site boundary at its closest point). The River Medlock is located approximately 40 m to the north west of the site, the river flows in a western direction and then to the south where is flows below the Dawson Street road bridge.
East	Immediately to the east of the site is Deansgate-Castlefield car park. The car park is flat and roughly level with the viaduct (approximately 0.5 m higher in elevation). The car park area is raised above the surrounding ground level by red brick arches, which are accessed along Bridgewater Street to the north east of the site. The arches are used as commercial units and car parking facilities. Warehouses, commercial units, residential flats and offices are located in the wider area east of the site. A staircase which leads from ground level to the Deansgate-Castlefield car park is located to the north east of the site. The staircase is located approximately 20m south of Beaufort Street and 10 m from the eastern site boundary.
South	Immediately to the south is a tramline, which runs parallel to the viaduct. Beyond the tramline is a railway line, which also runs parallel to the viaduct and tramline. The Bridgewater Canal and canal basin are located to the south of the tram and railway lines. Beyond the canal is Slate Wharf, Merchant Bridge and Castle Street, the buildings on Castle Street comprise art galleries, offices, residential flats, restaurants and bars. The railway archway immediately below the railway line to the west of Castle Street has been developed into a restaurant with associated outdoor dining area. The Rochdale Canal is located approximately 50 m south the site. It runs in an east to west orientation and terminates at Rochdale Canal Lock 92, approximately 30 m east of a footbridge where Castle Street crosses the canal. A building, which was part of a former sawmill with a chimney, is located on the northern bank of the Rochdale Canal, approximately 50 m east of the site. This building appears to have been repurposed for use as a gallery and residential apartments. Merchants Bridge footbridge crosses the Bridgewater Canal and connects Catalan Square on the northern bank to Slate Wharf on the southern bank. Slate Wharf is characterised by residential apartment blocks, Castlefield Green area of grass, canal quay, car parks and road networks. The Slate Wharf Bridge is closed to public access via a locked gate and is located approximately 20 m south of the viaduct beyond the tram and active railway lines.
West	Immediately west of the site is a parcel of vacant land covered in railway ballast, which would have historically formed part of the railway which crossed the viaduct. This area tapers in width becoming narrower due to the change in trajectory of the tramline located immediately south. Egerton Street and Dawson Street (A56) are located approximately 50 m west of the site and runs in a north to south direction. The River Medlock flows below Dawson Street Bridge at this point. Land to the west is occupied by roads, residential and commercial buildings.

3 Environmental Setting

A summary of relevant background information and site history for the site prior to the ground investigation is presented below in Table 3-1. The information is presented in full within the Land Quality Desk Study and Preliminary Risk Assessment (Royal HaskoningDHV, 2021).

Table 3-1: Summary of Environmental Setting and Site History

Categories	Details
Geology	No superficial deposits recorded.
	Bedrock – Chester Pebble Bed Formation (Principal Aquifer).
Mining & Ground Working	Site is not located within an area affected by historical coal mining. There are 19 records of surface ground workings on the land below the viaduct; these include 12 records of canals, four records of unspecified wharves, one quay, one unspecified and one timber wharf. An additional 24 records of surface ground working are located within 250m of the site.
Groundwater Vulnerability	High in the eastern half of the site and low in the western half of the site.
Source Protection Zone (SPZ)	Not located within an SPZ. SPZ 3 (Total Catchment) located approximately 474 m east.
Groundwater Abstraction	No active groundwater abstractions are recorded on the land directly below or within 1km of the viaduct.
Nearest Surface Water	Bridgewater Canal basin complex is located below the viaduct extending to the north and south.
River / Sea Flooding	Land directly below the viaduct has a high risk of river flooding (Flood Zone 2).
Groundwater Flooding	Land directly below the viaduct has a moderate to high risk of groundwater flooding.
Surface Water Abstractions	No active surface water abstractions are recorded on the land directly below, or within 250m, of the viaduct.
Discharge Consents	No active discharge consents are attributed to the site. The nearest active consent is located 79m south west relating to the discharge of sewer storm overflow into the River Medlock.
Sensitive Land Use	The viaduct is not located in, or within 250 m of a Site of Special Scientific Interest (SSSI), Ramsar Site, Special Area of Conservation (SAC), Special Protection Area (SPA), National or Local Nature Reserve (NNR/LNR) or Ancient Woodland. There are no Nitrate Vulnerable Zones (NVZs) located at or within 250 m of the site. The viaduct is a Grade II listed structure.
Pollution Incidents to Controlled Waters	None attributed to the viaduct. The nearest recorded incident is 172 m north west: June 2001; the pollutant is recorded as diesel which had a minor impact to water (category 3 incident).
Registered landfill, historical landfill or other waste disposal sites	The EA records show that there are no active landfills or recorded historical landfills located at or within 250 m of the viaduct. Local Authority mapping identifies that there were two scrap yards adjacent to the northern boundary and to the south west of the site. Further details are not provided.

Categories	Details
	There are three records of mobile plant licences being issued 164m north west to R E M Mobile Plant and Rec Remediation Ltd.
Waste exemptions	There are six recorded waste exemptions with multiple activities recorded at the same address within 250 m of the site. The nearest is 69 m south of the site and is recorded as sorting of controlled drugs for disposal.
Historical garages	There are three records of historical garages located below the site; additional details on the garages are not included within the information reviewed.
Historical tanks	There is one record of an unspecified tank located below the site recorded on the map of 1922.
Fuel Sites	There is one record of a petrol station located within 250 m of the site. Now obsolete it was located 96 m south.
Historical industrial land uses	The following historical industrial land uses are recorded on or underlying the site: wharves, railways buildings and sidings, unspecified depots and unspecified ground workings. Within 250 m of the site, the following historical industrial land uses are recorded: ■ railway buildings, sidings and stations ■ unspecified depot / commercial / industrial / goods sheds ■ gravel / sand pits / unspecified ground workings ■ wharves, quays and docks ■ paper mill / unspecified mills / silk and cotton mills / sawmill ■ corporation yard ■ cleansing depot ■ refuse heap / unspecified heap ■ chemical works / automobile works
Unexploded Ordnance	Moderate Risk within the general vicinity of the site.
Site & Immediate Surrounding History	The Castlefield Viaduct was constructed in 1893 to carry heavy rail traffic in and out of Manchester Central Station (now Manchester Central convention complex). The viaduct had three rail tracks to carry rail traffic. Manchester Central Station closed in 1969 and the viaduct fell into disuse with the tracks later dismantled. The viaduct has been derelict since then. Prior to the creation of the viaduct, a timber wharf was present on the land underlying the viaduct from the earliest available mapping (1848). In addition to the timber wharf, part of the land underlying the viaduct was occupied by rectangular warehouses from the earliest available OS mapping (1848) until the 1990s, these buildings also extended to the north of the viaduct. The area below and surrounding the viaduct has a history of both industrial and commercial activities since the earliest available mapping to the present day. A number of residential properties have also surrounded the site, also since the earliest available mapping to the present day.
Summary of Preliminary Risk Assessment	Three end use scenarios were considered: leaving the site in its current condition; the pilot scheme in Phase 1; and, permanently repurposed in Phase 2.

Categories	Details
	The PRA is summarised as follows: ■ To remain in its current condition, it was considered that the site poses a moderate to low risk to site visitors / trespassers and controlled waters. ■ In undertaking Phase 1, the site poses a moderate to low risk to future site users, development workers and controlled waters. ■ In undertaking Phase 2, the site poses a moderate to low risk to future site users and a moderate to low risk to construction workers, controlled waters & future buildings / utilities.

4 Ground Investigation Methodology

4.1 Introduction

An intrusive ground investigation comprising the excavation of 10 hand dug pits and 10 paint scrapes was undertaken on the 8th July 2021. The hand dug pits and paint scrapes were undertaken by Royal HaskoningDHV environmental engineers.

4.2 Summary of Field and Laboratory Work

4.2.1 Service Clearance

Intrusive investigation locations were positioned to avoid features identified on the service drawings.

4.2.2 Hand Dug Pits

Hand dug pits were excavated at 10 locations across the viaduct to a maximum depth of 0.3m below ground level (bgl). The exploratory hole locations are illustrated on Figure 3.1, at the end of this report. Each hand dug pit was backfilled with arisings to pre-excavation levels. Exploratory hole logs are presented as Appendix A.

4.2.3 Paint Scrape Samples

Paint scrape samples were collected from ten locations across the viaduct. The locations of the paint samples are illustrated on Figure 3.1, at the end of this report.

4.2.4 Soil Logging

At each hand dug pit location a description of the soils, total depth of the location and differences in soil type or strata was recorded. Soil logging was undertaken in general accordance with BS 5930:2015 + A1:2020 and Eurocode 7. Recorded sample depths and water strikes were recorded on the exploratory hole logs. The exploratory hole logs are presented as Appendix A and exploratory hole photographs as Appendix B.

4.3 Soil and Soil Leachate Sampling

Soil samples were collected from each exploratory hole location in accordance with BS 10175:2011 + A2:2017 ‘Investigation of Potentially Contaminated Sites’. Sampling was informed by visual and olfactory indicators of contamination.

Soil samples for laboratory analysis were obtained from the arisings of each exploratory location by hand. Disposable nitrile gloves were worn during sampling, with a clean pair of gloves used for each sample to avoid cross contamination.

The soils were separated from the track ballast and placed into appropriate sample tubs and jars as provided by the laboratory. Sample jars intended for volatile organic compounds (VOC) testing were filled with as much material as possible to reduce void space / trapped air.

The sample jars were labelled and dated upon completion of each sample collection, and the containers were placed in a cool box to maintain their temperature for transportation to the laboratory.

4.4 Paint Sampling

Paint samples were collected from each paint scrape location. Paint samples for laboratory analysis were obtained by scraping the paint flakes off the viaduct using a stainless-steel paint scraper. The stainless-steel paint scraper was cleaned after each sample was collected to avoid cross contamination.

Paint samples were placed into appropriate sample jars as provided by the laboratory. Sample jars were filled with a minimum of 5 g of paint as specified by the laboratory.

The sample jars were labelled and dated upon completion of each sample collection, and the containers were placed in a cool box to maintain their temperature for transportation to the laboratory.

4.5 Surface Water Sampling

Surface water sampling was undertaken at one point within the Bridgewater Canal (SW1). The sample was collected using a bucket. The surface water sample was placed into appropriate sample bottles as provided by the laboratory. The surface water monitoring location is presented on Figure 3.1, at the end of this report.

The sample bottles were labelled and dated upon completion of each sample collection, and the containers were placed in a cool box to maintain their temperature for transportation to the laboratory.

4.6 Laboratory Chemical Analysis

A total of 11 soil samples collected from the Made Ground were scheduled for the following analysis:

- Asbestos.
- pH, Total Organic Carbon (TOC) and ammoniacal nitrogen as N.
- Metals: arsenic, barium, beryllium, boron, cadmium, chromium III, chromium VI, copper, lead, mercury, nickel, selenium, vanadium and zinc.
- Polycyclic aromatic Hydrocarbons (PAH) speciated (EPA 16).
- Petroleum hydrocarbons (Total Petroleum Hydrocarbons Criteria Working Group (TPH CWG) with aromatic/aliphatic split).
- Phenols.
- VOCs and Semi Volatile Organic Compounds (SVOCs).

In addition, a total of three soil samples collected for the Made Ground were scheduled for the analysis of herbicides.

A total of 11 soil (Made Ground) and 11 ballast samples were collected and tested for the following soil-leachate chemical analysis:

- pH, sulphate, ammoniacal nitrogen as N and total alkalinity.
- Metals: arsenic, barium, beryllium, boron, cadmium, chromium III, chromium VI, copper, lead, mercury, nickel, selenium, vanadium and zinc.
- PAHs speciated (EPA 16).
- TPH CWG with aromatic/aliphatic split.

- Phenols.
- VOCs and SVOCs.

In addition, a total of three soil leachate samples collected for the Made Ground were scheduled for the analysis of herbicides.

One surface water sample was collected for the following chemical analysis:

- pH, sulphate, ammoniacal nitrogen as N and total alkalinity.
- Metals: arsenic, barium, beryllium, boron, cadmium, chromium III, chromium VI, copper, lead, mercury, nickel, selenium, vanadium and zinc.
- PAHs speciated (EPA 16).
- TPH CWG with aromatic/aliphatic split.
- Phenols.
- VOCs and SVOCs.
- M-BAT (calcium and dissolved organic carbon).

A total of 10 paint samples were collected for the following chemical analysis:

- Metals: cadmium, chromium, lead, nickel and zinc.

The laboratory analysis was undertaken by i2 Analytical UK Ltd. The original laboratory certificates are presented in Appendix C.

4.7 Laboratory Quality Control

One in every 10 samples was collected as a duplicate. The duplicate sample was collected in an identical manner and scheduled for laboratory analysis as part of the quality assurance process to identify potential laboratory variability. The duplicate samples were labelled and numbered anomalously, so that the laboratory was not aware that the sample was a duplicate.

Duplicate samples were collected from one location as summarised below.

Table 4-1: Duplicate Samples

Duplicate ID	Exploratory Hole Location	Depth (m bgl)
HP Dup 1 (soil)	HP110	Ground Level – 0.10
HP Dup 1 (soil-leachate)		
HP Dup Ballast	HP110B	

5 Ground Investigation Findings

5.1 Site Specific Ground Conditions

A summary of the encountered geology on the viaduct is provided in Table 5-1 below.

Table 5-1: Site Specific Geology

Stratum	Geological Unit	Depth to top of stratum	Depth to base of stratum	Thickness (m)	Description
Made Ground	Made Ground	Ground Level	0.30	0.30	Dark brown sandy clayey Gravel with occasional rootlets. Sand is fine to coarse. Gravel is fine to coarse, angular to subangular ballast.

5.2 Visual and Olfactory Evidence of Contamination

Visual and olfactory observations of potential contamination was identified during the ground investigation and is summarised in Table 5-2 below.

Table 5-2: Summary of Visual and Olfactory Evidence of Contamination

Exploratory Hole Location	Visual/olfactory evidence of contamination	Strata
HP101	Oily/greasy feel on soil. Some hydrocarbon staining on track ballast.	Made Ground
HP102		
HP103		
HP104		
HP105		
HP106		
HP107		
HP108		
HP109		
HP110		

5.3 Features and Obstructions

Features and obstructions were identified within the hand dug pit locations across the site. The hand dug pits were terminated at the depth of the obstructions and features. A summary is presented below in Table 5-3.

Table 5-3: Summary of Features and Obstructions

Hand Dug Pit	Depth m bgl (m AOD)	Feature / Obstruction
HP101	0.25 (30.85)	Timber sleeper.
HP102	0.30 (30.70)	Metal Viaduct base.
HP103	0.15 (30.85)	
HP104	0.30 (30.70)	
HP105	0.20 (30.90)	

Hand Dug Pit	Depth m bgl (m AOD)	Feature / Obstruction
HP106	0.30 (30.70)	
HP107	0.30 (30.70)	
HP108	0.30 (30.70)	
HP109	0.15 (30.85)	
HP110	0.10 (30.80)	

5.4 Laboratory Quality Assurance / Quality Control

A comparison of the duplicate sample data sets has been undertaken and a summary of the differences between the samples are provided in the Table 5-4 below.

Table 5-4: Comparison of Duplicate Sample Data Sets

Sample	Duplicate	Differences detected	Greatest difference	Sample concentration (mg/kg)	Duplicate concentration (mg/kg)
HP110 (soil)	HP_Dup_1	Metals PAH TPH	Lead (28.6%) Benzo(k)fluoranthene (36%) Aromatic >EC10-EC12 (50%)	1400 150 43	1000 96 23
HP110 (soil leachate)	HP_Dup_1	Metals PAH	Copper (24.2%) Fluoranthene (71.4%)	9.10 0.21	12.00 0.06
HP110_B (ballast)	HP_Dup_Ballast	Metals PAH	Copper (78.7%) Pyrene (66.7%)	7.50 0.06	1.60 0.02

The differences in concentrations recorded in metals, PAHs and TPHs within soil and soil-leachate samples represents the variability of the samples and is not likely to be representative of invalid laboratory analysis. The differences in the dataset does not make a material difference to the assessment and report conclusions, therefore have been included.

6 Human Health Generic Quantitative Risk Assessment

6.1 Introduction

In order to provide an assessment of the risks to humans presented by contaminants within soils, a human health GQRA has been undertaken. The GQRA involves comparing contaminant concentrations observed at the site with appropriate generic assessment criteria (GACs). The GQRA forms Tier 2 of the tiered approach to assessing risks from land contamination as set out in the EA 2021 Land Contamination Risk Management Framework (LCRM).

The GACs used to screen the soil data include:

- Department for the Environment and Rural Affairs (CL:AIRE, 2014), Category 4 Screening Levels (C4SLs) and in their absence;
- Land Quality Management and the Chartered Institute for Environmental Health, Suitable for Use Levels (S4UL) (LQM,2014); and,
- In the absence of a C4SL or S4UL, data within the Environmental Industries Commission (EIC) / The Association of Geotechnical and Geoenvironmental Specialists (AGS) / Contaminated Land: Applications in Real Environment (CL:AIRE, 2010) have been utilised.

C4SLs are values that have been derived for use in England and Wales to define sites posing low or no risk to human health. The Environmental Protection Act 1990 Contaminated Land Statutory Guidance (DEFRA, 2012) includes a categorisation for land contamination assessment, ranging from Category 4 (low risk) to Category 1 (significant / high risk).

C4SLs are set contaminant levels which are not representative of significant possibility of significant harm (SPoSH) and, as such, where concentrations are below these levels as site would not be classed as a contaminated land as defined by Part 2A of the Environmental Protection Act.

The C4SLs have been adopted by the Department for Communities and Local Government (DCLG) for use under UK planning to define whether land is suitable for use. To date C4SL, have been published for nine contaminants (benzo(a)pyrene, benzene, lead, arsenic, cadmium, chromium VI, tetrachloroethene, trichloroethene and vinyl chloride).

In the absence of C4SLs, the S4ULs have been utilised which are based on minimal risk levels to human health. In the absence of C4SLs and S4ULs, EIC / AGS derived GACs have been used which are also based on minimal risk levels.

Generic parameters are currently published for the following land uses:

- Residential land use with gardens used for growing vegetables.
- Residential land use with gardens not used for growing vegetables.
- Public open space parkland.
- Public open space within residential developments.
- Allotments.
- Commercial land use.

To assess risk to site users, the scenario of public open space – park (POS_{park}) has been adopted as this land use is the most similar to the site's conceptual site model. In a POS_{park} land use scenario, the key receptor is considered to be a young child (age 0 – 6 years) who accompanies parents visiting the park for family visits, picnics and dog walking. It has been assumed that children visit the park 170 days a year and are on site for two hours per day. The exposure pathways considered relevant to young children are:

- Ingestion of soils and dust (outdoors).
- Dermal contact with soils and dusts (outdoors).
- Inhalation of dusts (outdoors).
- Inhalation of vapours (outdoors).

Soil samples have also been screened against allotment GACs to assess the potential risks should food stuffs be grown on the viaduct in the future. This scenario is considered to be a very conservative screen. The exposure pathways relevant to this end use scenario are:

- Direct ingestion of soil (outdoors) and dust derived from soils (indoors).
- Ingestion of soil attached to fruit/vegetables.
- Ingestion of fruit/vegetables.
- Dermal contact with soils (outdoors).
- Inhalation of dust derived from soils (outdoors).
- Inhalation of vapours (outdoors).

The GACs are derived for a variety of Soil Organic Matter (SOM) contents at 1%, 2.5% and 6%. As part of the ground investigation, SOM analysis was completed on representative samples. The SOM concentration of Made Ground soils on site ranged from 8.3% to 14%. It is thought that the SOM concentrations within Made Ground soils recorded are reflective of the PAH and TPH concentrations in all samples rather than true organic matter content. Therefore, a conservative SOM of 1% has been applied to the analysis.

6.2 Soil Screening Results

The soil data collected during the investigation have been screened against the POS_{park} and allotment GACs relevant to the site. The laboratory certificates of chemical analysis are provided within Appendix D.

6.2.1 Soil Sample Assessment

The soil sample data screened against the GAC for a public open space (park) end use identified exceedances for metals and PAHs. A summary of the screening for soil samples is provided below in Table 6-1.

Table 6-1: Summary of Screened Chemical Data – POS_{park} End Use

Determinands	Total number of samples	GAC (mg/kg)	Data range (min – max) mg/kg	No. of results above GAC	Location and exceedance of GAC
Lead	11	1300	59 – 4400	4	HP103 (0.00 – 0.15 m) – 4400 mg/kg HP105 (0.00 – 0.20 m) – 1400 mg/kg HP107 (0.00 – 0.30 m) – 2100 mg/kg HP110 (0.00 – 0.10 m) – 1400 mg/kg

Determinands	Total number of samples	GAC (mg/kg)	Data range (min – max) mg/kg	No. of results above GAC	Location and exceedance of GAC
Chrysene	11	93	6.3 – 270	3	HP103 (0.00 – 0.15 m) –94 mg/kg HP110 (0.00 – 0.10 m) – 270 mg/kg HP Dup 1 (0.00 – 0.10 m) – 220 mg/kg
Benzo(a)pyrene	11	10	6.4 – 320	10	HP101 (0.00 – 0.25 m) – 37 mg/kg HP102 (0.00 – 0.30 m) – 12 mg/kg HP103 (0.00 – 0.15 m) – 62 mg/kg HP104 (0.00 – 0.30 m) – 13 mg/kg HP105 (0.00 – 0.20 m) – 39 mg/kg HP106 (0.00 – 0.30 m) – 22 mg/kg HP107 (0.00 – 0.30 m) – 72 mg/kg HP108 (0.00 – 0.30 m) – 16 mg/kg HP110 (0.00 – 0.10 m) – 320 mg/kg HP Dup 1 (0.00 – 0.10 m) – 280 mg/kg

The soil sample data screened against the GAC for an allotment end use identified exceedances for metals, TPHs and PAHs. A summary of the screening for soil samples is provided below in Table 6-2.

Table 6-2: Summary of Screened Chemical Data – Allotment End Use

Determinands	Total number of samples	GAC (mg/kg)	Data range (min – max) mg/kg	No. of results above GAC	Location and exceedance of GAC
Arsenic	11	49	16 – 83	9	HP101 (0.00 – 0.25 m) – 62 mg/kg HP102 (0.00 – 0.30 m) – 69 mg/kg HP103 (0.00 – 0.15 m) – 51 mg/kg HP104 (0.00 – 0.30 m) – 66 mg/kg HP106 (0.00 – 0.30 m) – 76 mg/kg HP107 (0.00 – 0.30 m) – 66 mg/kg HP108 (0.00 – 0.30 m) – 83 mg/kg HP110 (0.00 – 0.10 m) – 60 mg/kg HP Dup 1 (0.00 – 0.10 m) – 62 mg/kg
Lead	11	80	59 – 4400	10	HP101 (0.00 – 0.25 m) – 1200 mg/kg HP102 (0.00 – 0.30 m) – 550 mg/kg HP103 (0.00 – 0.15 m) – 4400 mg/kg HP104 (0.00 – 0.30 m) – 520 mg/kg HP105 (0.00 – 0.20 m) – 1400 mg/kg HP106 (0.00 – 0.30 m) – 1100 mg/kg HP107 (0.00 – 0.30 m) – 2100 mg/kg HP108 (0.00 – 0.30 m) – 1200 mg/kg HP110 (0.00 – 0.10 m) – 1400 mg/kg HP Dup 1 (0.00 – 0.10 m) – 1000 mg/kg
Nickel	11	53	39 – 150	10	HP101 (0.00 – 0.25 m) – 67 mg/kg HP102 (0.00 – 0.30 m) – 80 mg/kg HP103 (0.00 – 0.15 m) – 150 mg/kg HP104 (0.00 – 0.30 m) – 61 mg/kg HP105 (0.00 – 0.20 m) – 55 mg/kg HP106 (0.00 – 0.30 m) – 70 mg/kg HP107 (0.00 – 0.30 m) – 70 mg/kg HP108 (0.00 – 0.30 m) – 73 mg/kg HP110 (0.00 – 0.10 m) – 60 mg/kg

Determinands	Total number of samples	GAC (mg/kg)	Data range (min – max) mg/kg	No. of results above GAC	Location and exceedance of GAC
					HP Dup 1 (0.00 – 0.10 m) – 61 mg/kg
Zinc	11	620	110 – 990	3	HP101 (0.00 – 0.25 m) – 680 mg/kg HP110 (0.00 – 0.10 m) – 990 mg/kg HP Dup 1 (0.00 – 0.10 m) – 790 mg/kg
Naphthalene	11	4.1	0.58 – 18	2	HP110 (0.00 – 0.10 m) – 18 mg/kg HP Dup 1 (0.00 – 0.10 m) – 12 mg/kg
Acenaphthene	11	34	1.4 – 85	2	HP110 (0.00 – 0.10 m) – 85 mg/kg HP Dup 1 (0.00 – 0.10 m) – 73 mg/kg
Fluorene	11	27	0.97 – 50	2	HP110 (0.00 – 0.10 m) – 50 mg/kg HP Dup 1 (0.00 – 0.10 m) – 44 mg/kg
Phenanthrene	11	15	11 – 540	8	HP101 (0.00 – 0.25 m) – 49 mg/kg HP103 (0.00 – 0.15 m) – 54 mg/kg HP104 (0.00 – 0.30 m) – 20 mg/kg HP105 (0.00 – 0.20 m) – 24 mg/kg HP106 (0.00 – 0.30 m) – 22 mg/kg HP107 (0.00 – 0.30 m) – 68 mg/kg HP110 (0.00 – 0.10 m) – 540 mg/kg HP Dup 1 (0.00 – 0.10 m) – 450 mg/kg
Fluoranthene	11	52	17 – 760	6	HP101 (0.00 – 0.25 m) – 81 mg/kg HP103 (0.00 – 0.15 m) – 170 mg/kg HP105 (0.00 – 0.20 m) – 65 mg/kg HP107 (0.00 – 0.30 m) – 140 mg/kg HP110 (0.00 – 0.10 m) – 760 mg/kg HP Dup 1 (0.00 – 0.10 m) – 660 mg/kg
Pyrene	11	110	16 – 710	4	HP103 (0.00 – 0.15 m) – 170 mg/kg HP107 (0.00 – 0.30 m) – 130 mg/kg HP110 (0.00 – 0.10 m) – 710 mg/kg HP Dup 1 (0.00 – 0.10 m) – 600 mg/kg
Chrysene	11	4.1	6.3 – 270	11	HP101 (0.00 – 0.25 m) – 39 mg/kg HP102 (0.00 – 0.30 m) – 12 mg/kg HP103 (0.00 – 0.15 m) – 94 mg/kg HP104 (0.00 – 0.30 m) – 14 mg/kg HP105 (0.00 – 0.20 m) – 33 mg/kg HP106 (0.00 – 0.30 m) – 22 mg/kg HP107 (0.00 – 0.30 m) – 64 mg/kg HP108 (0.00 – 0.30 m) – 14 mg/kg HP109 (0.00 – 0.15 m) – 6.3 mg/kg HP110 (0.00 – 0.10 m) – 270 mg/kg HP Dup 1 (0.00 – 0.10 m) – 220 mg/kg
Benzo(a)pyrene	11	5.7	6.4 – 320	11	HP101 (0.00 – 0.25 m) – 37 mg/kg HP102 (0.00 – 0.30 m) – 12 mg/kg HP103 (0.00 – 0.15 m) – 62 mg/kg HP104 (0.00 – 0.30 m) – 13 mg/kg HP105 (0.00 – 0.20 m) – 39 mg/kg HP106 (0.00 – 0.30 m) – 22 mg/kg HP107 (0.00 – 0.30 m) – 72 mg/kg HP108 (0.00 – 0.30 m) – 16 mg/kg

Determinands	Total number of samples	GAC (mg/kg)	Data range (min – max) mg/kg	No. of results above GAC	Location and exceedance of GAC
					HP109 (0.00 – 0.15 m) – 6.4 mg/kg HP110 (0.00 – 0.10 m) – 320 mg/kg HP Dup 1 (0.00 – 0.10 m) – 280 mg/kg
Aromatic C10-C12	11	13	<1 – 46	2	HP110 (0.00 – 0.10 m) – 46 mg/kg HP Dup 1 (0.00 – 0.10 m) – 23 mg/kg
Aromatic C12-C16	11	23	8.3 – 230	8	HP101 (0.00 – 0.25 m) – 30 mg/kg HP102 (0.00 – 0.30 m) – 27 mg/kg HP103 (0.00 – 0.15 m) – 42 mg/kg HP104 (0.00 – 0.30 m) – 24 mg/kg HP105 (0.00 – 0.20 m) – 26 mg/kg HP107 (0.00 – 0.30 m) – 31 mg/kg HP110 (0.00 – 0.10 m) – 230 mg/kg HP Dup 1 (0.00 – 0.10 m) – 170 mg/kg
Aromatic C16-C21	11	46	52 – 1300	11	HP101 (0.00 – 0.25 m) – 210 mg/kg HP102 (0.00 – 0.30 m) – 73 mg/kg HP103 (0.00 – 0.15 m) – 410 mg/kg HP104 (0.00 – 0.30 m) – 81 mg/kg HP105 (0.00 – 0.20 m) – 170 mg/kg HP106 (0.00 – 0.30 m) – 110 mg/kg HP107 (0.00 – 0.30 m) – 340 mg/kg HP108 (0.00 – 0.30 m) – 78 mg/kg HP109 (0.00 – 0.15 m) – 52 mg/kg HP110 (0.00 – 0.10 m) – 1200 mg/kg HP Dup 1 (0.00 – 0.10 m) – 1300 mg/kg
Aromatic C21-C35	11	370	86 – 1300	6	HP101 (0.00 – 0.25 m) – 380 mg/kg HP103 (0.00 – 0.15 m) – 790 mg/kg HP105 (0.00 – 0.20 m) – 430 mg/kg HP107 (0.00 – 0.30 m) – 680 mg/kg HP110 (0.00 – 0.10 m) – 1000 mg/kg HP Dup 1 (0.00 – 0.10 m) – 1300 mg/kg

Asbestos analysis was undertaken on each of the soil samples collected as part of the investigation. No asbestos was detected within the samples analysed.

6.2.2 Discussion of Potential Risks to Human Health from Site Soils

This section of the report focuses primarily on exceedances for the POS_{park} end use as this land scenario closely matches the proposed end use. It is also likely that foodstuffs would be grown in elevated planters due to the matrix of the track ballast and associated soils to support plant growth.

6.2.2.1 Metals

Lead

Lead has been recorded above the POS_{park} GAC of 1mg/kg within four of the 11 soil samples collected from the site. Exceedances were recorded within HP103, HP105, HP107 and HP110 at concentrations ranging from 1400mg/kg to 4400mg/kg. The highest concentration was recorded within the soil sample collected from HP103.

The exceedances recorded are three orders of magnitude greater than that of the associated GAC. Therefore, the concentrations present have the potential to causes an unacceptable risk to human health receptors if mitigation measures are not incorporated into the design of the scheme.

6.2.2.2 Polycyclic Aromatic Hydrocarbons

Chrysene

Chrysene was recorded above the POS_{park} GAC of 93mg/kg within three of the 11 soil samples collected from the site. Exceedances were recorded within HP103, HP110 and HP Dup 1, the concentrations recorded were 94mg/kg, 270mg/kg and 220mg/kg respectively.

The exceedances of the GAC associated with chrysene are considered to be localised hotspots within the site rather than widespread. The exceedance within HP103 is considered to be marginal, whereas the reaming two exceedances associated with HP110 and its duplicate are an order of magnitude greater. Therefore, concentrations present within HP110 and its duplicate may potentially represent an unacceptable risk to human health receptors if mitigation measures are not incorporated into the design of the scheme within these areas.

Benzo(a)pyrene

Benzo(a)pyrene was recorded above the POS_{park} GAC of 11mg/kg within ten of the 11 soil samples collected from the site. An exceedance of benzo(a)pyrene was not recorded within HP109. Concentrations in excess of the GAC ranged from 12mg/kg to 320mg/kg, with the highest concentration recorded within HP110.

The exceedances were recorded across the site and benzo(a)pyrene contamination is considered to be widespread rather than an isolated occurrence. Therefore, the concentrations present have the potential to represent an unacceptable risk to human health receptors if mitigation measures are not incorporated into the design of the scheme.

6.2.2.3 Allotment End Use

The screening of the soil chemical data against GACs protective of an allotment end use is considered to be overly conservative given the proposed end use of the viaduct. However, it is understood that foodstuffs /'greenstuff' will be planted directly into planters.

6.3 Drinking Water Pipes Assessment

The screening of the analytical results against United Kingdom Water Industry Research (UKWIR) Water Supply Threshold Values criteria indicates that at least one or more determinands that have the potential to permeate drinking water pipes and contaminate the supply (hydrocarbons and PAHs) are recorded above the UKWIR in No. 11 soil samples. The screened data are presented in Appendix D.

If new drinking water pipes are to be lain in Made Ground soils, a bespoke assessment needs to be undertaken along the route of future pipelines in accordance with the local water authority requirements. A risk assessment in line with United Utilities guidance needs to be completed and submitted for their consideration. Mitigation measures could include service runs of 'clean' inert materials that could be utilised and/or barrier piping to be protective of the potable water supply.

6.4 Paint Sample Screening Results

Paint samples collected as part of the ground investigation were assessed against the SoBRA aGAC protective of construction and maintenance workers who, for example, may be involved in repainting the viaduct structure.

6.4.1 Paint Sample Assessment

The paint samples screened against SoBRA aGAC identified no exceedances for cadmium. No additional aGAC values are currently available for the remaining metals assessed as part of the laboratory analysis.

Table 6-3: Summary of Paint Samples

Determinands	Total Number of samples	aGAC (mg/kg)	Data range (min-max) mg/kg
Cadmium	10	12,000	<0.20 – 10
Chromium	10	N/A	110 – 310
Lead	10	N/A	55,000 – 66,000
Nickel	10	N/A	12 – 30
Zinc	10	N/A	1,200 – 6,500

Due to the concentrations of lead and zinc recorded in the paint samples, there is the potential for unacceptable risks to construction and maintenance workers should appropriate mitigation measures, such as use of PPE, not be incorporated into the scheme design. In addition, the release of the paint flakes needs to be controlled when being worked on and not released into the wider environment. The works to refurbish the viaduct should be undertaken by a suitably qualified contractor who will provide the appropriate working methodologies and risk assessments to undertake work of this nature.

6.5 Human Health GQRA Summary

The assessment of the soil and paint chemical data identified the following key points:

- Concentrations of benzo(a)pyrene in excess of their respective POS_{Park} GAC are widespread across the site and may potentially present an unacceptable risk to human health receptors of appropriate measures are not incorporated into the design.
- Exceedances of GAC for lead and chrysene are considered to be localised. The concentrations recorded may pose a potentially unacceptable risk to human health if appropriate mitigation measures are not incorporated into the design.
- Should the end use for the site change to an allotment, mitigation measures would be required above those required for a POS_{park} end use due to the degree of exceedances recorded.
- If potable water pipes are to be laid as part of the proposed scheme, risk assessment in line with United Utilities guidance needs to be completed.
- Paint samples containing high levels of lead and zinc were identified, mitigation measure protective of the health of construction and maintenance works should be incorporated into the project design and maintenance scheme to reduce the potential risks to these receptors.

7 Controlled Waters Generic Quantitative Risk Assessment

The controlled waters GQRA assessment evaluates potentially unacceptable risks posed to identified controlled water receptors from the migration of potential on-site sources of contamination as identified in the CSM. The GQRA has assessed the following data from the site investigation:

- Soil leachate data.
- Ballast leachate data.
- Surface water data.

7.1 Methodology

To support the evaluation of potential risks to controlled water receptors from contaminants within soils and ballast, a controlled waters GQRA has been undertaken. This has been carried out by comparing the results of the soil leachate and ballast leachate analysis with the relevant screening criteria for the key controlled waters receptors.

To assess the risks to surface water receptors, soil-leachate derived data has also been compared with Water Framework Directive (WFD) EQS for inland surface water.

The Water Framework Directive United Kingdom Technical Advisory Group (WFD-UKTAG) (WFD-UKTAG, 2013) river and lake assessment method for specific pollutants (metals) Metal Bioavailability Assessment Tool (M-BAT) was used to derive Tier 2 site specific EQS values for copper, lead, zinc, and nickel. These parameters were obtained from analysis of a surface water sample recovered from the surface water receptor (Bridgewater Canal).

The WFD-UKTAG ambient background concentration (ABC) for 'all other freshwaters not listed' of 1.4µg/l was added to the zinc EQS.

The risk to groundwater beneath the viaduct has not been considered from site soils / ballast, primarily due to the lack of plausible pollutant linkages between the source and receptor.

7.2 Assessment of Risks to Surface Water Receptors

7.2.1 Soil and Ballast Leachate Assessment

Table 7-1 summarises the soil leachate assessment with respect to data recorded above the EQS. Screened data are presented in Appendix D.

Table 7-1: Soil Leachate Data EQS Assessment

Determinands	Total number of samples	EQS (µg/l)	Data range (min – max) µg/l	No. of results above EQS	Location of exceedance of the EQS
Copper	11	17.1	5.2 – 24	2	HP101 (0.00 – 0.25 m) – 24 µg/l HP102 (0.00 – 0.30 m) – 20 µg/l
Lead	11	4.99	2.1 – 9.6	7	HP101 (0.00 – 0.25 m) – 5.6 µg/l HP103 (0.00 – 0.15 m) – 5.2 µg/l HP105 (0.00 – 0.20 m) – 9.6 µg/l HP107 (0.00 – 0.30 m) – 7.7 µg/l HP108 (0.00 – 0.30 m) – 7.0 µg/l HP110 (0.00 – 0.10 m) – 5.9 µg/l

Determinands	Total number of samples	EQS (µg/l)	Data range (min – max) µg/l	No. of results above EQS	Location of exceedance of the EQS
					HP Dup 1 (0.00 – 0.10 m) – 5.5 µg/l
Zinc	11	24.66	3.4 – 28	1	HP101 (0.00 – 0.25 m) – 28 µg/l
Anthracene	11	0.1	<0.01 – 0.14	1	HP109 (0.00 – 0.15 m) – 0.14 µg/l
Fluoranthene	11	0.0063	0.03 – 1.6	11	HP101 (0.00 – 0.25 m) – 0.16 µg/l HP102 (0.00 – 0.30 m) – 0.08 µg/l HP103 (0.00 – 0.15 m) – 0.39 µg/l HP104 (0.00 – 0.30 m) – 0.03 µg/l HP105 (0.00 – 0.20 m) – 0.14 µg/l HP106 (0.00 – 0.30 m) – 0.11 µg/l HP107 (0.00 – 0.30 m) – 0.62 µg/l HP108 (0.00 – 0.30 m) – 0.08 µg/l HP109 (0.00 – 0.15 m) – 1.6 µg/l HP110 (0.00 – 0.10 m) – 0.21 µg/l HP Dup 1 (0.00 – 0.10 m) – 0.06 µg/l
Benzo(a)pyrene	11	0.00017	<0.01 – 0.81	8	HP101 (0.00 – 0.25 m) – 0.05 µg/l HP103 (0.00 – 0.15 m) – 0.1 µg/l HP105 (0.00 – 0.20 m) – 0.14 µg/l HP106 (0.00 – 0.30 m) – 0.05 µg/l HP107 (0.00 – 0.30 m) – 0.32 µg/l HP109 (0.00 – 0.15 m) – 0.81 µg/l HP110 (0.00 – 0.10 m) – 0.11 µg/l HP Dup 1 (0.00 – 0.10 m) – 0.09 µg/l

Note: the assessment criteria are lower than the laboratory limit of detection (LoD) for determinands such as fluoranthene and benzo(a)pyrene. Only samples that exceeded the laboratory LoD have been included in this assessment.

Table 7-2 summarises the ballast leachate assessment with respect to data recorded above the EQS. Screened data is presented in Appendix D.

Table 7-2: Ballast Leachate Data EQS Assessment

Determinands	Total number of samples	EQS (µg/l)	Data range (min – max) µg/l	No. of results above EQS	Location of exceedance of the EQS
Lead	11	4.99	1.4 – 30	7	HP101B (0.00 – 0.25 m) – 9.8 µg/l HP103B (0.00 – 0.15 m) – 23 µg/l HP105B (0.00 – 0.20 m) – 30 µg/l HP107B (0.00 – 0.30 m) – 13 µg/l HP108B (0.00 – 0.30 m) – 15 µg/l HP109B (0.00 – 0.15 m) – 19 µg/l HP110B (0.00 – 0.10 m) – 7.9 µg/l
Fluoranthene	11	0.0063	0.01 – 0.1	11	HP101B (0.00 – 0.25 m) – 0.04 µg/l HP102B (0.00 – 0.30 m) – 0.01 µg/l HP103B (0.00 – 0.15 m) – 0.06 µg/l HP104B (0.00 – 0.30 m) – 0.02 µg/l HP105B (0.00 – 0.20 m) – 0.06 µg/l HP106B (0.00 – 0.30 m) – 0.02 µg/l HP107B (0.00 – 0.30 m) – 0.05 µg/l HP108B (0.00 – 0.30 m) – 0.02 µg/l HP109B (0.00 – 0.15 m) – 0.1 µg/l HP110B (0.00 – 0.10 m) – 0.06 µg/l

Determinands	Total number of samples	EQS (µg/l)	Data range (min – max) µg/l	No. of results above EQS	Location of exceedance of the EQS
					HP Dup B (0.00 – 0.10 m) – 0.02 µg/l
Benzo(a)pyrene	11	0.00017	<0.01 – 0.09	2	HP109B (0.00 – 0.15 m) – 0.09 µg/l HP110B (0.00 – 0.10 m) – 0.07 µg/l

Note: the assessment criteria are lower than the laboratory limit of detection (LoD) for determinands such as fluoranthene and benzo(a)pyrene. Only samples that exceeded the laboratory LoD have been included in this assessment.

7.2.2 Surface Water Assessment

Table 7-3 summarises the surface water assessment with respect to the data recorded above the EQS. Screened data are presented as Appendix D. The surface water sample was collected from the Bridgewater Canal.

Table 7-3: Surface Water Data EQS Assessment

Determinands	EQS (µg/l)	Exceedance concentration (µg/l)
Lead	4.99	8.4
Zinc	24.66	25
Fluoranthene	0.0063	0.02

Note: the assessment criteria are lower than the laboratory limit of detection (LoD) for determinands such as fluoranthene and benzo(a)pyrene. Only samples that exceeded the laboratory LoD have been included in this assessment.

7.2.3 Discussion of Potentially Unacceptable Risks Relating to Surface Water Receptors

Concentrations of contaminants in soil-derived leachate, ballast-derived leachate and surface water were assessed against EQS protective of the Bridgewater Canal and River Medlock, a discussion of the results is provided below.

7.2.3.1 Metals and Metalloids

A comparison of exceedances of the EQS for metals in soil-derived leachate and ballast-derived leachate is presented below in Table 7-4.

Table 7-4: Comparison of Metals in Soil-Derived Leachate and Ballast-Derived Leachate EQS Assessment

Determinands	No. of samples (soil-Leachate)	No. of exceedances (soil-leachate)	No. of samples (ballast-leachate)	No. of exceedances (ballast leachate)
Copper	11	2	11	0
Lead	11	7	11	7
Zinc	11	1	11	0

Copper

Copper was recorded above its EQS of 17.1 µg/l within two of the 11 soil leachate samples analysed. The exceedances were recorded within HP101 and HP102 at concentrations of 24 µg/l and 20 µg/l respectively. No additional exceedances of the copper EQS were recorded within the remaining soil leachate or ballast leachate samples.

The concentrations of copper recorded within the soil leachate samples are marginally above the site specific EQS. It is therefore considered unlikely that the recorded concentrations of copper at the site represent an unacceptable risk to surface water receptors.

Lead
Lead was recorded above its EQS of 4.99 µg/l within seven of the 11 soil leachate samples and seven of the 11 ballast leachate samples. Six of the exceedances of the lead EQS were recorded in both the soil leachate and ballast leachate samples from the same exploratory holes. An exceedance of lead was also recorded within the surface water sample.

The concentrations of lead recorded within the ballast leachate samples were generally higher than those recorded in the soil leachate samples. Within the soil leachate samples the exceedances were within the same order of magnitude as the EQS. However, within the ballast leachate samples, apart from two samples, all exceedances were one order of magnitude greater than the EQS.

Exceedances of the lead EQS are widespread across the site and could potentially represent an unacceptable risk to surface water receptors.

Zinc
Zinc was recorded above its EQS of 24.66 µg/l within one of the 11 soil leachate samples analysed. The exceedance was recorded within HP101 at a concentration of 28 µg/l. No additional exceedances of the zinc EQS were recorded within the remaining soil leachate or ballast leachate samples. However, an exceedance of zinc was also recorded within the surface water sample at a similar concentration to that of the soil leachate sample (25 µg/l).

The concentration of zinc recorded within the soil leachate sample was marginally above the site specific EQS and is not considered widespread across the site. It is therefore considered unlikely that the recorded concentration of zinc at the site represents an unacceptable risk to surface water receptors.

7.2.3.2 Polycyclic Aromatic Hydrocarbons

A comparison of the exceedances of the EQS for PAHs in soil leachate and ballast leachate is presented in Table 7-5.

Table 7-5: Comparison of PAHs in Soil Leachate and Ballast Leachate – EQS Assessment

Determinands	No. of soil leachate samples	No. of exceedances (soil leachate)	No. of ballast leachate samples	No. of exceedances (ballast leachate)
Anthracene	11	1	11	0
Fluoranthene	11	11	11	11
Benzo(a)pyrene	11	8	11	2

Anthracene
Anthracene was recorded above its EQS of 0.1 µg/l in one of the 11 soil leachate samples analysed at the site. The exceedance was recorded within the sample obtained from HP109 at a concentration of 0.14 µg/l. Apart from one soil leachate sample, the remaining soil leachate samples and all ballast leachate samples recorded concentrations of anthracene below the laboratory limit of detection.

Analysis of the soil leachate and ballast leachate samples indicates that the exceedance of anthracene is isolated and not widespread across the site. Therefore, it is considered unlikely that anthracene represents an unacceptable risk to surface water receptors.

Fluoranthene
Fluoranthene was recorded above its EQS of 0.0063µg/l in all soil leachate samples at concentrations ranging from 0.03 µg/l to 1.6 µg/l. Fluoranthene was also recorded above its EQS in all ballast leachate samples. Exceedances were recorded at concentrations between 0.01 µg/l and 0.1 µg/l within the ballast leachate samples. The greatest exceedance for both the soil leachate and ballast leachate was recorded in samples collected from HP109 and HP019B. An exceedance of fluoranthene was also recorded within the surface water sample collected as part of the ground investigation.

Analysis of the chemical data indicates that fluoranthene has the potential to leach from the soils and the ballast site wide at a concentration which may pose an unacceptable risk to surface waters. The impact would come via the present drainage arrangement.

Benzo(a)pyrene
Benzo(a)pyrene was recorded above its EQS of 0.00017 µg/l within eight of the 11 soil leachate samples analysed at the site. Exceedances of benzo(a)pyrene ranged from 0.05 µg/l to 0.81 µg/l with the most elevated concentration recorded in HP109.

Benzo(a)pyrene was also recorded above its EQS in two of the 11 ballast leachate samples analysed at the site. The exceedances of the EQS were recorded in HP109B and HP110B at concentrations of 0.09 µg/l and 0.07 µg/l respectively.

Concentrations of benzo(a)pyrene within the surface water sample was recorded as being below the laboratory limit of detection.

Analysis of the chemical data indicates that benzo(a)pyrene contamination within soil leachate samples is widespread across the site. Within the ballast leachate samples, the exceedances are localised. In terms of risk to surface water receptors, it is considered that it has the potential to leach from the soils at a concentration which may pose an unacceptable risk to surface waters. The impact would come via the present drainage arrangement.

7.3 Controlled Waters GQRA Summary

Based on the findings of the ground investigation and subsequent assessment, the following conclusions can be made for controlled waters:

- It is considered unlikely that the recorded concentrations of copper and zinc at the site represent an unacceptable risk to surface water receptors.
- Lead, benzo(a)pyrene and fluoranthene have the potential to leach at concentrations which may pose an unacceptable risk to surface waters.

Whilst exceedances of the EQS have been identified within soil-leachate sample results, the following needs to be considered:

- The method of laboratory analysis overestimates what could be leached from the soil in a real-life scenario from rainfall due to the aggressive nature of the sample preparation.
- The most elevated exceedances of the EQS were recorded for metals (copper, zinc and lead) and PAHs (benzo(a)pyrene and fluoranthene) and these generally have a low groundwater mobility.
- It is known that surface water runoff is collected via a drainage system located on the viaduct and discharged into the Bridgewater Canal. It is considered likely that the canal is lined with puddle clay

forming an impermeable barrier between the surface water and groundwater bodies therefore a risk to groundwater has not been considered further.

8 Refined Conceptual Site Model

The CSM presented in the PRA identifying potential contamination source, pathway and receptors (Royal HaskoningDHV, 2021) has been updated following the GQRA. The refined CSM incorporates the site geology, hydrogeology, hydrology and the site-specific data gathered during this phase of investigation to determine the potential contaminant linkages (PCLs).

The refine CSM is described below prior to inclusion in the refined risk assessment table. The pathways are considered to be the same.

8.1 Refined Sources

Based on the available information for the site the following potential sources of contamination have been identified in Table 8-1 below.

Table 8-1: Refined Sources on the Viaduct Structure

Potential Source	Refined Contaminants
Railway land and ballast/soil matrix (on viaduct structure)	Soils (human health) - lead, chrysene and benzo(a)pyrene.
	Soils (water pipelines) - hydrocarbons and PAH.
	Soil-Leachate (surface water receptors) – primarily lead, fluoranthene and benzo(a)pyrene.
Metals and paint flaked off from viaduct structure (on viaduct structure)	Lead and Zinc.

The potential for further contamination may be present within areas between exploratory hole locations.

Potential offsite sources below and within the immediate vicinity of the scheme have been summarised below. In the absence of ground investigation, the sources and potential contaminants have been reduced.

Table 8-2: Refined Off-Site Sources on the Viaduct Structure

Potential Source	Refined Contaminants
Land uses above and below ground (historical and current) which have the potential to impact the ground.	Contaminants of potential concern include metals and metal compounds, cyanides, sulphates, phenols, PAHs, creosote, paints and solvents (aromatic hydrocarbons and chlorinated aliphatic hydrocarbons), organotins, cyanides, biocides, fuels and oil hydrocarbons and asbestos.

8.2 Potential Pathways and Receptors

Three potential scenarios have been identified in relation to the use of the site, these include:

- The site in its current condition (current CSM).
- The site during the Phase 1 ‘Pilot Scheme’ being utilised as a ‘micro park’ this includes the introduction of a temporary footpath surface, the erection of temporary pop-up shelters (assumed to be well ventilated) and placement of planters (Phase 1 Pilot Scheme CSM).
- The site when it is permanently repurposed in Phase 2 as an urban park and travel hub. This will include the construction of food / beverage stands, gardens, stalls, seating areas, an events space and toilet facilities. It has been assumed that raised planting beds will be created and a pathway between railway ballast and consumption of site grown vegetables is not considered (Phase 2, Permanent Urban Park and Travel Hub CSM).

Table 8-3 below outlines which receptors and pathways would be associated with each of the three scenarios in relation to the refined model.

Table 8-3: Refined Pathways and Receptors

Receptors	Pathways	Current CSM	Phase 1 - Pilot Scheme CSM	Phase 2- Permanent Urban Park and Travel Hub CSM	Comments regarding sources
Human Health					
Site users (visitors, trespassers, maintenance, future workers and visitors)	Direct exposure through dermal contact, ingestion or inhalation of contaminants within the ballast cover across the viaduct.	✓	✓	✓	
	Direct exposure through dermal contact, ingestion or inhalation of contaminants within the paintwork.	✓	✓	✓	
	Inhalation of volatile contaminants.	X	X	X	Not identified in investigation
Development workers during construction	Direct exposure through dermal contact, ingestion or inhalation of contaminants within the ballast cover across the viaduct.	X	✓	✓	
	Direct exposure through dermal contact, ingestion or inhalation of contaminants within the paintwork.	✓	✓	✓	
	Inhalation of volatile contaminants.	X	X	X	Not identified in investigation
Controlled Waters					
Chester Pebble Bed Formation – Principal Aquifer	Migration via preferential pathways caused by piling (if required).	X	X	✓	Specifically, at ground level
Bridgewater Canal (below the viaduct and in immediate surrounding area)	Leaching, dissolution and migration of contaminants from the ballast covering the site via surface drainage and discharge into surface water receptors.	✓	✓	✓	
River Medlock (40m west of the site)		✓	✓	✓	
Buildings and Utilities					
Future utilities (on the structure and below)	Direct contact and permeation of water supply pipes.	X	X	✓	High level assessment identifies a risk

Table 8-4: Revised Conceptual Site Model for Current Use

Source	Pathway	Receptor	Associated hazard	Potential consequence of contaminant linkage	Likelihood of contaminant linkage	Risk classification	Justification
Historical site use as railway land, ballast/soil layer covering viaduct and paint on the viaduct.	Direct exposure through dermal contact, ingestion or inhalation of soil/ballast and associated dusts.	Site visitors and trespassers	Health risk	Severe	Low likelihood	Moderate to low risk	Exceedances of the POS_{park} GACs for lead and PAHs were identified within the soil samples analysed. Exposure is possible but it would be unlikely that visitors and trespassers would be interfering with the soil matrix surrounding the ballast.
		Maintenance Workers		Severe	Likely	High	Maintenance workers who visit the site in order to undertake vegetation clearance may come into direct contact with the contaminants identified on site specifically lead and PAH. The likelihood of a linkage being present can be lowered through appropriate hygiene and working procedures coupled with PPE.
	Direct exposure through dermal contact, ingestion or inhalation of paint flakes and associated dusts.	Site visitors and trespassers		Severe	Low likelihood	Moderate to low risk	High concentrations of metals, in particular lead and zinc, were recorded within paint samples collected from the site. Exposure is possible but it would be unlikely that visitors and trespassers would be interfering with the paint work.
		Maintenance Workers		Severe	Likely	High	Maintenance workers who visit the site in order to undertake painting of the viaduct may come into direct contact with the contaminants identified on site specifically lead and zinc. The likelihood of a linkage being present can be lowered through appropriate hygiene and working procedures coupled with PPE.
	Leaching of contaminants and migration via surface water network.	Bridgewater Canal and River Medlock	Pollution of controlled waters	Mild	Likely	Moderate to Low	Exceedances of EQS for lead and PAHs were recorded in both soil leachate and ballast leachate samples analysed at the site. A widespread impact was noted for lead and fluoranthene. This is an aggressive test. There was no evidence of water within the exploratory holes and the timeframes between raining and drainage of the viaduct maybe insufficient for leachate to be generated.

Source	Pathway	Receptor	Associated hazard	Potential consequence of contaminant linkage	Likelihood of contaminant linkage	Risk classification	Justification
							There may be an unacceptable risk to surface water receptors. The risk could be lowered through appropriate drainage arrangements.

Table 8-5: Revised Conceptual Site Model for Phase 1 – Pilot Scheme

Source	Pathway	Receptor	Associated hazard	Potential consequence of contaminant linkage	Likelihood of contaminant linkage	Risk classification	Justification
Historical site use as railway land, ballast/soil layer covering viaduct and paint on the viaduct.	Direct exposure through dermal contact, ingestion or inhalation of soil/ballast and associated dusts.	Future site users	Health risk	Severe	Low likelihood	Moderate to low risk	Exceedances of the POS_{park} GACs for lead and PAHs were identified within the soil samples analysed. Exposure is possible but it would be unlikely that future site users would be interfering with the soil matrix surrounding the ballast. Further mitigation will occur if the ballast was be covered to create a level walkway.
		Development workers during construction		Severe	Likely	High	Construction workers will come into direct contact with the ballast / soil matrix and the contaminants identified on site specifically lead and PAH. The likelihood of a linkage being present can be lowered through appropriate hygiene and working procedures incorporated into a CEMP coupled with PPE.
		Maintenance Workers		Severe	Likely	High	Maintenance workers who visit the site may come into direct contact with the contaminants identified on site specifically lead, zinc and PAH. The likelihood of a linkage being present can be lowered through appropriate hygiene and working procedures coupled with PPE.
	Direct exposure through dermal contact, ingestion or inhalation of paint flakes and associated dusts.	Future site users		Severe	Low likelihood	Moderate to low risk	High concentrations of metals, in particular lead and zinc, were recorded within paint samples collected from the site. Exposure is possible but it would be unlikely that future users would be interfering with the paint work.
		Development workers during construction		Severe	Likely	High	Construction workers will come into direct contact with the paint work and the elevated metal concentrations specifically lead and zinc. The likelihood of a linkage being present can be lowered through appropriate hygiene and working procedures incorporated into a CEMP coupled with PPE.

Source	Pathway	Receptor	Associated hazard	Potential consequence of contaminant linkage	Likelihood of contaminant linkage	Risk classification	Justification
		Maintenance Workers		Severe	Likely	High	Maintenance workers who visit the site in order to undertake painting of the viaduct may come into direct contact with the contaminants identified on site specifically lead and zinc. The likelihood of a linkage being present can be lowered through appropriate hygiene and working procedures coupled with PPE.
	Inhalation of volatile contaminants.	Future site users	Health risk	Medium	Unlikely	Low risk	Analysis of soil samples indicated that there were no exceedances of POS_{park} GACs for either VOC or SVOC.
	Leaching of contaminants and migration via surface water network.	Bridgewater Canal and River Medlock	Pollution of controlled waters	Mild	Likely	Moderate to Low	Exceedances of EQS for lead and PAHs were recorded in both soil leachate and ballast leachate samples analysed at the site. A widespread impact was noted for lead and fluoranthene. This is an aggressive test. There was no evidence of water within the exploratory holes and the timeframes between raining and drainage of the viaduct maybe insufficient for leachate to be generated. There may be an unacceptable risk to surface water receptors. The risk could be lowered through appropriate drainage arrangements.

Table 8-6: Revised Conceptual Site Model for Phase 2 – Permanent Urban Park and Travel Hub

Source	Pathway	Receptor	Associated hazard	Potential consequence of contaminant linkage	Likelihood of contaminant linkage	Risk classification	Justification
Historical site use as railway land, ballast layer covering viaduct and paint on the viaduct.	Direct exposure through dermal contact, ingestion or inhalation of soil/ballast and associated dusts.	Future site users	Health risk	Severe	Low likelihood	Moderate to low risk	Exceedances of the POS_{park} GACs for lead and PAH were identified within the soil samples analysed. Exposure is possible but it would be unlikely that future site users would be interfering with the soil matrix surrounding the ballast. If left exposed at the surface, site visitors may come into direct contact with the contaminants identified. However, it is likely that the underlying soil and ballast will be covered by a temporary or permanent walkway and therefore breaking the source-pathway-receptor linkage. Should any area of the viaduct be developed in such a way that food stuffs be planted directly into the ground additional mitigation measures would need to be incorporated into the design scheme.
		Development workers during construction		Severe	Likely	High	Construction workers will come into direct contact with the ballast / soil matrix and the contaminants identified on site specifically lead and PAH. The likelihood of a linkage being present can be lowered through appropriate hygiene and working procedures incorporated into a construction environmental management plan (CEMP) coupled with PPE.
		Maintenance Workers		Severe	Likely	High	Maintenance workers who visit the site may come into direct contact with the contaminants identified on site specifically lead and PAH. The likelihood of a linkage being present can be lowered through appropriate hygiene and working procedures coupled with PPE.
	Direct exposure through dermal contact, ingestion or	Future site users		Severe	Low likelihood	Moderate to low risk	High concentrations of metals, in particular lead and zinc, were recorded within paint samples collected from the site. Exposure is possible but it would be unlikely that future users would be interfering with the paint work.

Source	Pathway	Receptor	Associated hazard	Potential consequence of contaminant linkage	Likelihood of contaminant linkage	Risk classification	Justification
	inhalation of paint flakes and associated dusts.	Development workers during construction		Severe	Likely	High	Construction workers will come into direct contact with the paint work and the elevated metal concentrations specifically lead and zinc. The likelihood of a linkage being present can be lowered through appropriate hygiene and working procedures incorporated into a CEMP coupled with PPE.
		Maintenance Workers		Severe	Likely	High	Maintenance workers who visit the site in order to undertake painting of the viaduct may come into direct contact with the contaminants identified on site specifically lead and zinc. The likelihood of a linkage being present can be lowered through appropriate hygiene and working procedures coupled with PPE.
	Inhalation of volatile contaminants.	Future site users		Medium	Unlikely	Low risk	Analysis of soil samples indicated that there were no exceedances of POS_{park} GACs for either VOC or SVOC. In addition, odours were not noted during the investigation works.
		Development workers during construction		Medium	Unlikely	Low risk	
		Maintenance Workers		Medium	Unlikely	Low risk	
	Leaching of contaminants and migration via surface water network.	Bridgewater Canal and River Medlock	Pollution of controlled waters	Mild	Likely	Moderate to Low risk	Exceedances of EQS for lead and PAHs were recorded in both soil leachate and ballast leachate samples analysed at the site. A widespread impact was noted for lead and fluoranthene. This is an aggressive test. There was no evidence of water within the exploratory holes and the timeframes between raining and drainage of the viaduct maybe insufficient for leachate to be generated. There may be an unacceptable risk to surface water receptors. The risk could be lowered through appropriate drainage arrangements.
	Direct contact and permeation of water supply pipes.	Future buildings and utilities	Building and foundation corrosion and impact to	Medium	Likely	Moderate risk	Exceedances of UKWIR screening criteria for PAH and TPH were recorded within the soil samples analysed. If drinking water pipes are to be laid, then the appropriate risk assessments should be complete and submitted to United Utilities in order to mitigate and lower the risk.

Source	Pathway	Receptor	Associated hazard	Potential consequence of contaminant linkage	Likelihood of contaminant linkage	Risk classification	Justification
			potable water supplies				
Sources below the viaduct and within the immediate vicinity as identified in Table 4-2	Direct exposure through dermal contact, ingestion or inhalation of soils, dusts or vapours.	Development workers during construction if works are required to the viaduct structure at ground level, such as the installation of new access ways or via piling	Health risk	Medium	Low likelihood	Moderate to low risk	Exposure to potential contaminants can be mitigated during construction with the use of appropriate working methods incorporated into a CEMP and use of PPE.
	Creation of preferential migration pathways via piling or construction works at ground level.	Surface water receptors (Bridgewater Canal and River Medlock)	Pollution of controlled waters	Mild	Low likelihood	Low Risk	If construction works are required at ground level, such as excavation works or piling, this has the potential to mobilise contaminants within soils or groundwater underlying the site associated with historical activities.

Source	Pathway	Receptor	Associated hazard	Potential consequence of contaminant linkage	Likelihood of contaminant linkage	Risk classification	Justification
		Groundwater: Principal Aquifer (Chester Pebble Bed Formation)		Medium	Low Likelihood	Moderate to Low risk	Piled foundations, if required, could potentially create a preferential pathway between sources underlying the viaduct and receptors.
	Direct contact and permeation of water supply pipes.	Future buildings and utilities	Building and foundation corrosion and impact to potable water supplies	Medium	Likely	Moderate	If new water pipes are required at ground level to service the viaduct, potential organic contaminants in soils could permeate potable water supplies and have detrimental impacts on human health.

9 Conclusions and recommendations

9.1 Conclusions

9.1.1 Summary of Human Health Risk Assessment

Based on the findings of the ground investigation and subsequent assessment, the following conclusions can be made for human health:

- The refined risk assessment has identified the following:
  - If the site remains the same the risk from the soil / ballast / paint in the absence of mitigation is considered to pose a moderate to low risk to site visitors/trespassers and a high risk to maintenance workers.
  - If the Phase 1 – Pilot Scheme is implemented the risk from the soil / ballast / paint in the absence of mitigation is considered to pose a moderate to low risk to site visitors/trespassers and a high risk to construction / maintenance workers. The risk from volatile contaminants to all receptors is considered low.
  - If the Phase 2 – Permanent Urban Park/Travel Hub is implemented the risk from the soil / ballast / paint in the absence of mitigation is considered to pose a moderate to low risk to site visitors/trespassers and a high risk to construction / maintenance workers. The risk from volatile contaminants to all receptors is considered low. The risk from off site sources, i.e. below the structure, is considered to be moderate to low to construction workers and moderate to potable water supply pipes.

9.1.2 Summary of Controlled Waters Risk Assessment

Based on the findings of the ground investigation and subsequent assessment, the following conclusions can be made for controlled waters:

- The refined risk assessment has identified the following:
  - In the sites current condition the soil / ballast has the potential to leach at concentrations which may pose a moderate to low risk to surface waters.
  - If the Phase 1 – Pilot Scheme or Phase 2 – Permanent Urban Park/Travel Hub is implemented the soil / ballast has the potential to leach at concentrations which may pose a moderate to low risk to surface waters.
  - If the Phase 2 – Permanent Urban Park/Travel Hub is implemented with the inclusion of piled foundations the risk from off-site sources (i.e. below the viaduct and within the immediate vicinity), is considered to be moderate to low risk in relation groundwater receptors and a low risk to surface water receptors.

9.2 Recommendations

The following recommendations are made:

- If new drinking water pipes are to be laid in Made Ground soils as part of the permanent scheme, a bespoke assessment needs to be undertaken along the route of future pipelines in accordance with the local water authority requirements.
- A CEMP should be prepared which should include measures to reduce the impact of ground conditions including:

- Provision of PPE to minimise direct contact of workers with site soils.
- Provision of adequate hygiene and welfare facilities for construction workers.
- Preparation and adoption of a site and task specific health and safety plan.
- Provision of adequate storage of stockpiled soils.
- Adequate storage of fuels/ chemicals and associated emergency response spillage control procedures.
- Method statements for use if unexpected contamination in soil or groundwater is encountered during construction and to ensure safe management and disposal of materials.

- Currently an assumption that a bridge proposed for the permanent Phase 2 permanent urban park and travel hub scheme can be supported from the viaduct and piling to provide support is not required. This is subject to change should Historic England find this design unacceptable on a Grade II listed structure. As such, intrusive investigation to obtain soil samples for both geo-environmental and geotechnical purposes will be required at ground level, and assessment of potential risks to controlled waters through piling as a contamination pathway
- Should piling be proposed to be undertaken within the aquifer located below the site. Consultations in respect to potential disturbance to water abstractions should be undertaken with the EA, and it may be necessary to undertake a piling risk assessment. If required, the risk assessment should be undertaken in accordance with industry guidance NC/99-17: Piling and Penetrative Ground Improvement Methods on Land Affected by Contamination: Guidance on Pollution Prevention (2001).

9.2.1 Recommendations for Re-use of Ballast with Soil Matrix

The following bespoke recommendations are made with regards to development of the site with the reuse of ballast material with soils:

- The risk to site users needs to be lowered by some form of treatment, e.g. covering of the ground with boarding, thereby interrupting the pathway and breaking the pollutant linkage.
- The risk to surface waters from onsite sources can be lowered through the refurbishment of the drainage network, i.e. interruption of the pathway resulting in the pollutant linkage being broken.
- If the installation of ‘green stuff’ such as vegetable plots or fruit growing areas – a recommendation is made that any planting is within raised beds disconnected from ballast, due to the degree of exceedances of the allotment GAC recorded.

9.2.2 Recommendations for Re-use of Ballast without Site Soil Matrix

The following bespoke recommendations are made with regards to the development of the site with the reuse of ballast material without site soils:

- The risk to site users needs to be lowered by some form of treatment for example potentially removing the soil matrix resulting in source removal and the pollutant linkage being broken.
- The risk to surface waters from onsite sources can be lowered through the refurbishment of the drainage network, i.e. interruption of the pathway resulting in the pollutant linkage being broken alternatively removal of the soil matrix will result in betterment.

9.2.3 Drainage of the Structure Presently and in the Future

The following recommendations are made with regards to the present and future drainage on the site:

- The drainage on site needs to be suitably refurbished so that rainwater is not retained around the ballast or ballast plus matrix giving it time to generate leachate impacted water.
- To address the risk from metals within the site soils and ballast will be required, which could include the following:
  - Sampling of surface water from the downpipe.
  - Installation of drainage that does not outfall directly into the canal system.
  - The installation of a multi-layer substrate technologies could be potentially be utilised for the direct treatment of surface water leached through the surface of the viaduct.
  - Removal of the soil matrix (as discussed above) to result in betterment.

9.2.4 Next Steps

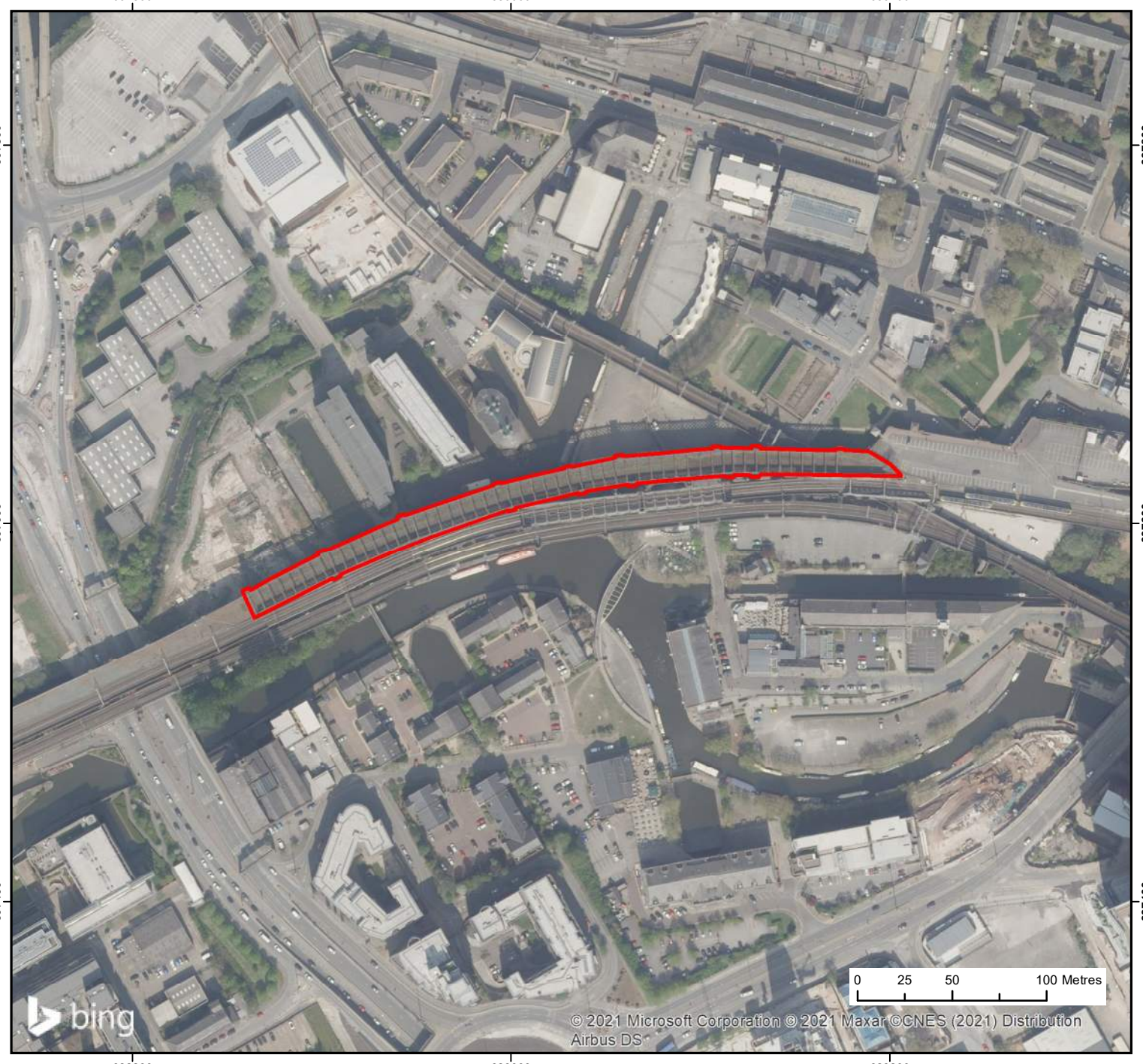
A remediation strategy and options appraisal should be produced. The appraisal will include a discussion on remedial measures to mitigate / lower the risk to the identified receptors in line with current guidance and is likely to be required to support the discharge of planning conditions.

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Figures

Royal HaskoningDHV





Legend:

Red Line Boundary

Data Sources: © HaskoningDHV UK Ltd, 2021
Base map: © OpenStreetMap (and) contributors, CC-BY-SA.

Client:	Project:
National Trust	Castlefield Viaduct

Title: Site Location Plan

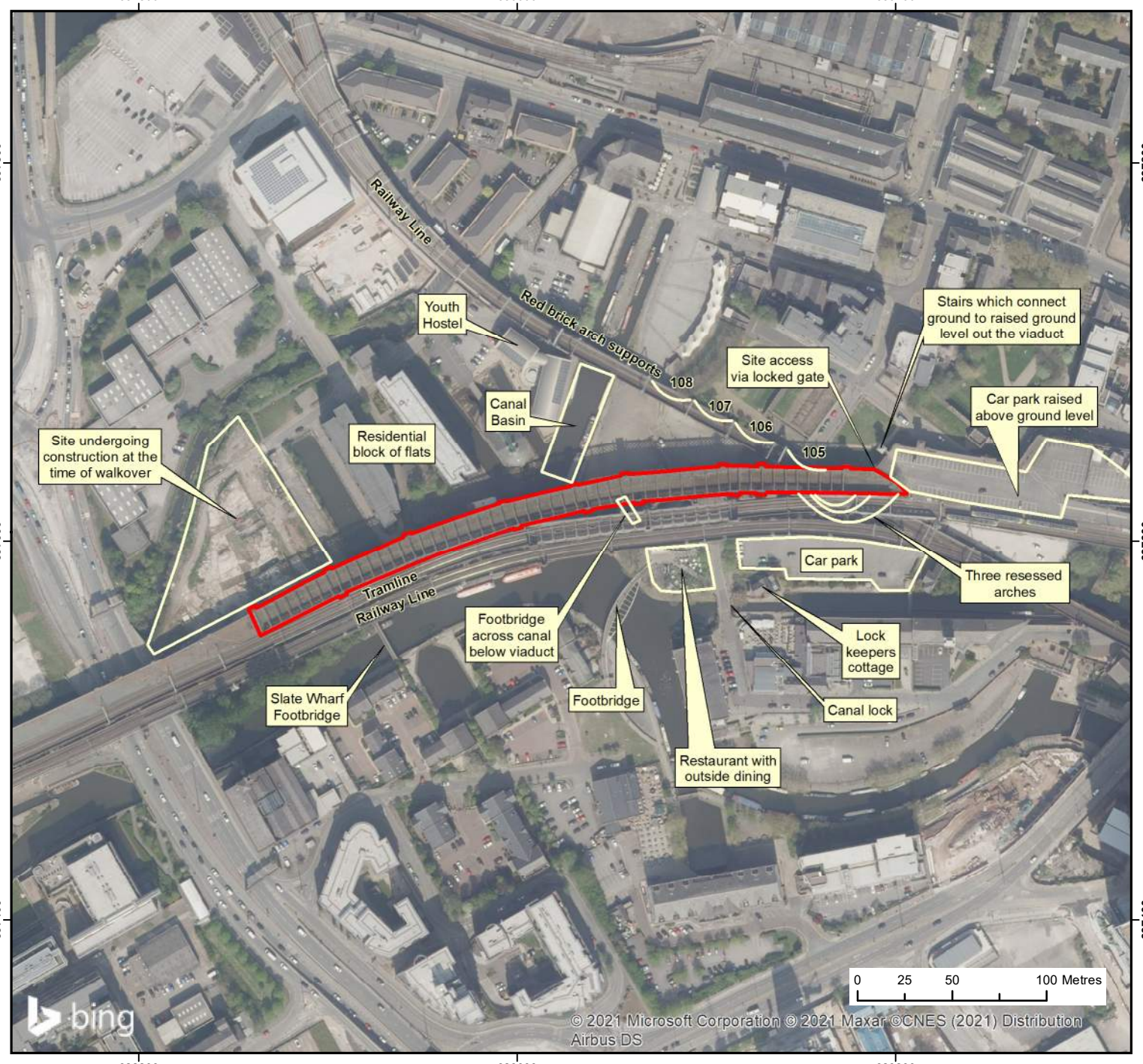
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1.1	PC2387-RHD-ZZ-XX-DR-Z-0001

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
01	28/04/2021	GC	KD	A4	1:3,000

Co-ordinate system: British National Grid

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Client:	Project:
National Trust	Castlefield Viaduct

Title: Site Layout

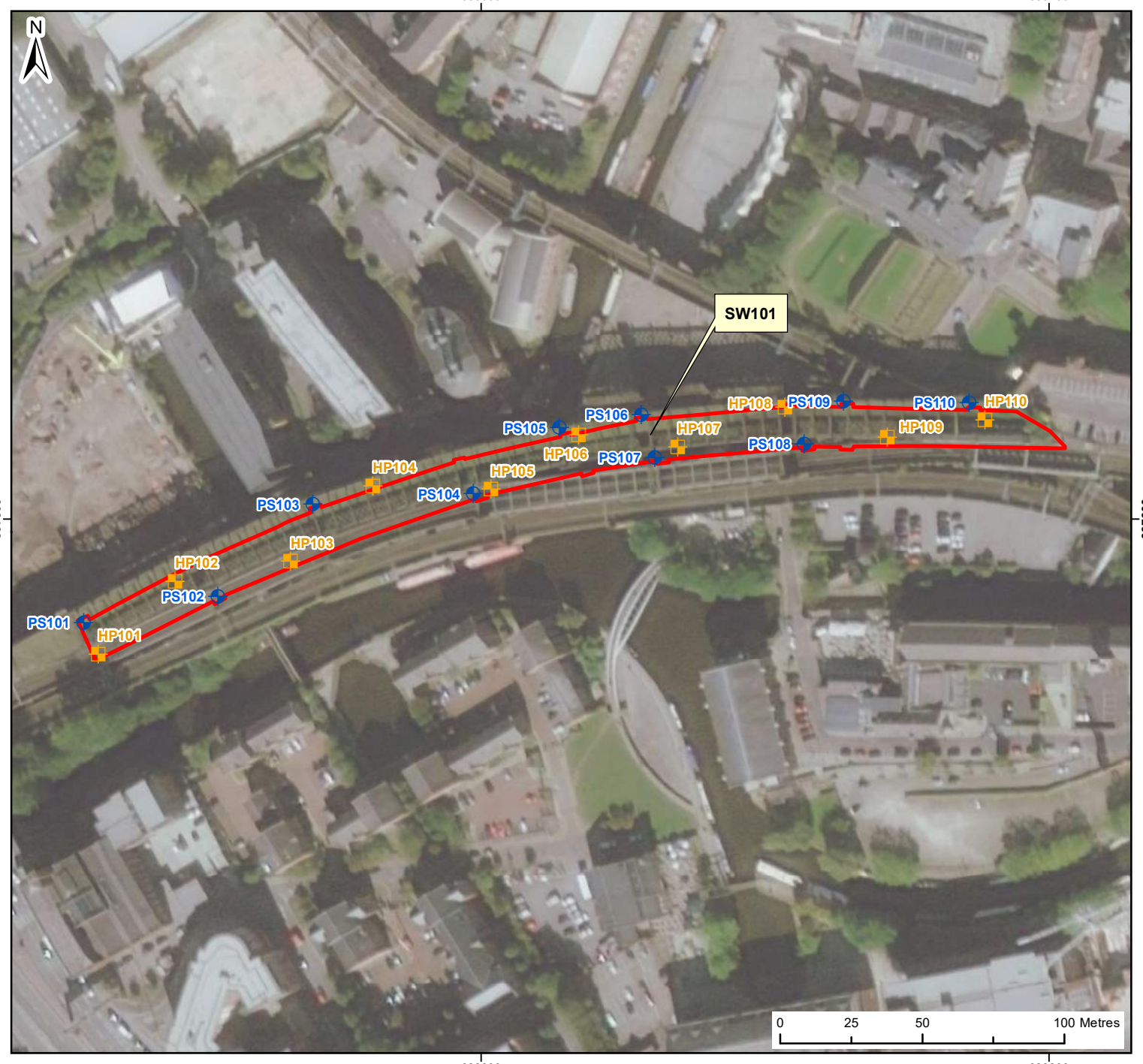
Figure:	Drawing No:
2.1	PC2387-RHD-ZZ-XX-DR-Z-0002

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
01	28/04/2021	GC	KD	A4	1:3,000

Co-ordinate system: British National Grid

Royal HaskoningDHV
Enhancing Society Together

ROYAL HASKONINGDHV
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2 ABBEY GARDENS
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WESTMINSTER
LONDON
SW1P 3NL
+44 (0)20 7222 2115
www.royalhaskoning.co.uk





Legend:

- Red Line Boundary

Exploratory Hole

- Hand Pit
- Paint sample

Data Sources: © HaskoningDHV UK Ltd, 2021
Base map: © OpenStreetMap (and) contributors, CC-BY-SA
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Client:	Project:
National Trust	Castlefield Viaduct

Title: Exploratory Hole Plan

Figure:	Drawing No:
3.1	PC2387-RHD-ZZ-XX-DR-Z-0005

Revision:	Date:	Drawn:	Checked:	Size:	Scale:
01	10/08/2021	GC	PP	A4	1:2,000

Co-ordinate system: British National Grid

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Appendix

Appendix A – Hand Dug Pit Logs

Royal HaskoningDHV

Hand Dug Pit Log

Royal HaskoningDHV
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Hand Pit No: HP101
Sheet 1 of 1

Project Name: Castlefield Viaduct	Project No. PC2387	Co-ords: E: 382865.31m, N: 397552.40m Level: 31.10mAD	Date 08/07/2021
Location: Manchester		Dimensions (m): Depth 0.25	Scale 1:10
Client: National Trust			Logged PP

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.00 - 0.25	ES					MADE GROUND: Grass over dark brown sandy GRAVEL with occasional rootlets. Gravel is fine to coarse, angular to subangular granite ballast with hydrocarbon staining.
				0.25	30.85		End of Pit at 0.25m

1

2

Remarks: Refusal on timber sleeper.

Groundwater not observed.

Stability:

AGS

Hand Dug Pit Log

Hand Pit No: HP102
Sheet 1 of 1

Project Name: Castlefield Viaduct	Project No. PC2387	Co-ords: E: 382892.43m, N: 397578.06m Level: 31.00mAD	Date 08/07/2021
Location: Manchester		Dimensions (m): Depth 0.30	Scale 1:10
Client: National Trust			Logged PP

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.00 - 0.30	ES					MADE GROUND: Grass over dark brown sandy GRAVEL with occasional rootlets. Gravel is fine to coarse, angular to subangular granite ballast with hydrocarbon staining.
				0.30	30.70		End of Pit at 0.30m

Remarks: Refusal on metal viaduct base.
Groundwater not observed.

Stability:

Hand Dug Pit Log

Hand Pit No: HP103
Sheet 1 of 1

Project Name: Castlefield Viaduct	Project No. PC2387	Co-ords: E: 382933.05m, N: 397584.94m Level: 31.00mAD	Date 08/07/2021
Location: Manchester		Dimensions (m): Depth 0.15	Scale 1:10
Client: National Trust			Logged PP

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.00 - 0.15	ES		0.15	30.85		MADE GROUND: Grass over dark brown sandy GRAVEL with occasional rootlets. Gravel is fine to coarse, angular to subangular granite ballast with hydrocarbon staining.
							End of Pit at 0.15m

1

2

Remarks: Refusal on metal viaduct base.

Groundwater not observed.

Stability:

AGS

Hand Dug Pit Log

Hand Pit No: HP104
Sheet 1 of 1

Project Name: Castlefield Viaduct	Project No. PC2387	Co-ords: E: 382961.89m, N: 397611.67m Level: 31.00mAD	Date 08/07/2021
Location: Manchester		Dimensions (m): Depth 0.30	Scale 1:10
Client: National Trust			Logged PP

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.00 - 0.30	ES					MADE GROUND: Grass over dark brown slightly clayey sandy GRAVEL. Sand is fine to medium. Gravel is fine to coarse, angular to subangular granite ballast with hydrocarbon staining
				0.30	30.70		End of Pit at 0.30m

Remarks: Refusal on metal viaduct base.
Groundwater not observed.

Stability:

Hand Dug Pit Log

Hand Pit No: HP105
Sheet 1 of 1

Project Name: Castlefield Viaduct	Project No. PC2387	Co-ords: E: 383003.56m, N: 397610.40m Level: 31.10mAD	Date 08/07/2021
Location: Manchester		Dimensions (m): Depth 0.20	Scale 1:10
Client: National Trust			Logged PP

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.00 - 0.20	ES		0.20	30.90		MADE GROUND: Grass over dark brown slightly clayey sandy GRAVEL. Sand is fine to medium. Gravel is fine to coarse, angular to subangular granite ballast with hydrocarbon staining
							End of Pit at 0.20m

1

2

Remarks: Refusal on metal viaduct base.

Groundwater not observed.

Stability:

Hand Dug Pit Log

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Hand Pit No: HP106
Sheet 1 of 1

Project Name: Castlefield Viaduct	Project No. PC2387	Co-ords: E: 383034.38m, N: 397629.58m Level: 31.00mAD	Date 08/07/2021
Location: Manchester		Dimensions (m): Depth 0.30	Scale 1:10
Client: National Trust			Logged PP

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.00 - 0.30	ES					MADE GROUND: Grass over dark brown slightly clayey sandy GRAVEL with occasional rootlets. Sand is fine to medium. Gravel is fine to coarse, angular to subangular granite ballast with hydrocarbon staining.
				0.30	30.70		End of Pit at 0.30m

1

2

Remarks: Refusal on metal viaduct base.
Groundwater not observed.

Stability:

AGS

Hand Dug Pit Log

Hand Pit No: HP107
Sheet 1 of 1

Project Name: Castlefield Viaduct	Project No. PC2387	Co-ords: E: 383069.31m, N: 397625.34m Level: 31.00mAD	Date 08/07/2021
Location: Manchester		Dimensions (m): Depth 0.30	Scale 1:10
Client: National Trust			Logged PP

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.00 - 0.30	ES					MADE GROUND: Grass over dark brown slightly clayey sandy GRAVEL with rare rootlets. Sand is fine to medium. Gravel is fine to coarse, angular to subangular granite ballast with hydrocarbon staining.
				0.30	30.70		End of Pit at 0.30m

Remarks: Refusal on metal viaduct base.
Groundwater not observed.

Stability:

Hand Dug Pit Log

Royal HaskoningDHV
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Hand Pit No: HP108
Sheet 1 of 1

Project Name: Castlefield Viaduct	Project No. PC2387	Co-ords: E: 383107.09m, N: 397639.37m Level: 31.00mAD	Date 08/07/2021
Location: Manchester		Dimensions (m): Depth 0.30	Scale 1:10
Client: National Trust			Logged PP

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.00 - 0.30	ES					MADE GROUND: Grass over dark brown slightly clayey sandy GRAVEL with rare rootlets. Sand is fine to medium. Gravel is fine to coarse, angular to subangular granite ballast with hydrocarbon staining.
				0.30	30.70		End of Pit at 0.30m

1

2

Remarks: Refusal on metal viaduct base.
Groundwater not observed.

Stability:

AGS

Hand Dug Pit Log

Hand Pit No: HP109
Sheet 1 of 1

Project Name: Castlefield Viaduct	Project No. PC2387	Co-ords: E: 383143.07m, N: 397628.92m Level: 31.00mAD	Date 08/07/2021
Location: Manchester		Dimensions (m): Depth 0.15	Scale 1:10
Client: National Trust			Logged PP

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.00 - 0.15	ES		0.15	30.85		MADE GROUND: Grass over dark brown slightly clayey sandy GRAVEL with rare rootlets. Sand is fine to medium. Gravel is fine to coarse, angular to subangular granite ballast with hydrocarbon staining
							End of Pit at 0.15m

1

2

Remarks: Refusal on metal viaduct base.

Groundwater not observed.

Stability:

Hand Dug Pit Log

Hand Pit No: HP110
Sheet 1 of 1

Project Name: Castlefield Viaduct	Project No. PC2387	Co-ords: E: 383177.50m, N: 397634.87m Level: 30.90mAD	Date 08/07/2021
Location: Manchester		Dimensions (m): Depth 0.10	Scale 1:10
Client: National Trust			Logged PP

Water Strike	Samples & In Situ Testing: Depth	Type	Results	Depth (m)	Level (m)	Legend	Stratum Description
	0.00 - 0.10	ES		0.10	30.80		MADE GROUND: Grass over dark brown slightly clayey sandy GRAVEL with rare rootlets. Sand is fine to medium. Gravel is fine to coarse, angular to subangular granite ballast with hydrocarbon staining. End of Pit at 0.10m

1

2

Remarks: Refusal on metal viaduct base.
Groundwater not observed.

Stability:

Appendix

Appendix B – Exploratory Hole Photographs

Royal HaskoningDHV



Photo Plate No. 01: HP101 (08/07/21, down hole picture (timber sleeper at base))



Photo Plate No. 02: HP101 (08/07/2021, excavated material)

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Royal HaskoningDHV
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Project : Castlefield Viaduct, Manchester

Client: National Trust

Hand Dug Pit Photo Plates

Project No.: PC2387

Date: 29/07/2021



Photo Plate No. 03: HP102 (08/07/21, down hole picture)



Photo Plate No. 04: HP102 (08/07/2021, excavated material)

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Royal HaskoningDHV
Enhancing Society Together

Project : Castlefield Viaduct, Manchester

Client: National Trust

Hand Dug Pit Photo Plates

Project No.: PC2387

Date: 29/07/2021



Photo Plate No. 05: HP103 (08/07/21, down hole picture)



Photo Plate No. 06: HP103 (08/07/2021, excavated material)

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Royal HaskoningDHV
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Project : Castlefield Viaduct, Manchester

Client: National Trust

Hand Dug Pit Photo Plates

Project No.: PC2387

Date: 29/07/2021



Photo Plate No. 07: HP104 (08/07/21, down hole picture



Photo Plate No. 08: HP104 (08/07/2021, excavated material)

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Royal HaskoningDHV
Enhancing Society Together

Project : Castlefield Viaduct, Manchester

Client: National Trust

Hand Dug Pit Photo Plates

Project No.: PC2387

Date: 29/07/2021



Photo Plate No. 08: HP105 (08/07/21, down hole picture)



Photo Plate No. 09: HP105 (08/07/2021, excavated material)

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Enhancing Society Together

Project : Castlefield Viaduct, Manchester

Client: National Trust

Hand Dug Pit Photo Plates

Project No.: PC2387

Date: 29/07/2021



Photo Plate No. 11: HP106 (08/07/21, down hole picture)



Photo Plate No. 12: HP106 (08/07/2021, excavated material)

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Project : Castlefield Viaduct, Manchester

Client: National Trust

Hand Dug Pit Photo Plates

Project No.: PC2387

Date: 29/07/2021



Photo Plate No. 13: HP107 (08/07/21, down hole picture)



Photo Plate No. 14: HP107 (08/07/2021, excavated material)

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Royal HaskoningDHV
Enhancing Society Together

Project : Castlefield Viaduct, Manchester

Client: National Trust

Hand Dug Pit Photo Plates

Project No.: PC2387

Date: 29/07/2021



Photo Plate No. 15: HP108 (08/07/21, down hole picture)



Photo Plate No. 16: HP108 (08/07/2021, excavated material)

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Royal HaskoningDHV
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Project : Castlefield Viaduct, Manchester

Client: National Trust

Hand Dug Pit Photo Plates

Project No.: PC2387

Date: 29/07/2021



Photo Plate No. 17: HP109 (08/07/21, down hole picture)



Photo Plate No. 18: HP109 (08/07/2021, excavated material)

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Enhancing Society Together

Project : Castlefield Viaduct, Manchester

Client: National Trust

Hand Dug Pit Photo Plates

Project No.: PC2387

Date: 29/07/2021



Photo Plate No. 19: HP110 (08/07/21, down hole picture)



Photo Plate No. 20: HP110 (08/07/2021, excavated material)

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Royal HaskoningDHV
Enhancing Society Together

Project : Castlefield Viaduct, Manchester

Client: National Trust

Hand Dug Pit Photo Plates

Project No.: PC2387

Date: 29/07/2021

Appendix

Appendix C – Chemical Analysis Laboratory Certificates

Royal HaskoningDHV

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Analytical Report Number : 21-86295

Replaces Analytical Report Number: 21-86295, issue no. 1
Additional analysis undertaken.

Project / Site name:	Castlefield Viaduct NT	**Samples received on:**	09/07/2021
Your job number:	PC2387	**Samples instructed on/ Analysis started on:**	12/07/2021
Your order number:	PC2387 103 100	**Analysis completed by:**	28/07/2021
Report Issue Number:	2	**Report issued on:**	28/07/2021
Samples Analysed:	22 leachate samples - 10 other samples - 11 soil samples - 1 water sample		

Signed:

Joanna Wawrzeczko
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.

This certificate should not be reproduced, except in full, without the express permission of the laboratory.
The results included within the report are representative of the samples submitted for analysis.

Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934531	1934532	1934533	1934534	1934535
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	13	10	14	10	9.4
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	2.0	2.0
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.7	8.0	7.8	8.0	7.9
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5	< 0.5	0.8	< 0.5	1.0
Total Organic Carbon (TOC)	%	0.1	MCERTS	6.3	6.0	8.1	4.8	4.8
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	2.7	1.8	2.4	2.3	1.4
Acenaphthylene	mg/kg	0.05	MCERTS	0.61	< 0.05	1.3	0.27	0.59
Acenaphthene	mg/kg	0.05	MCERTS	7.4	1.6	6.2	3.6	2.9
Fluorene	mg/kg	0.05	MCERTS	5.2	1.0	3.7	2.0	1.7
Phenanthrene	mg/kg	0.05	MCERTS	49	13	54	20	24
Anthracene	mg/kg	0.05	MCERTS	13	3.3	16	4.2	6.5
Fluoranthene	mg/kg	0.05	MCERTS	81	24	170	29	65
Pyrene	mg/kg	0.05	MCERTS	78	23	170	26	67
Benzo(a)anthracene	mg/kg	0.05	MCERTS	41	14	97	14	39
Chrysene	mg/kg	0.05	MCERTS	39	12	94	14	33
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	44	14	130	16	46
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	16	5.3	97	5.9	16
Benzo(a)pyrene	mg/kg	0.05	MCERTS	37	12	62	13	39
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	14	5.8	42	5.9	17
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	4.4	1.4	12	1.8	4.3
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	17	6.5	46	6.4	19
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	448	140	996	164	382
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	62	69	51	66	44
Barium (aqua regia extractable)	mg/kg	1	MCERTS	310	230	610	220	330
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.7	1.9	1.5	1.3	1.2
Boron (water soluble)	mg/kg	0.2	MCERTS	1.1	0.7	0.7	0.5	0.6
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	2.4	3.1	2.6	2.7	1.6
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	58	69	63	60	57
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	58	69	63	61	57
Copper (aqua regia extractable)	mg/kg	1	MCERTS	330	310	230	250	210
Lead (aqua regia extractable)	mg/kg	1	MCERTS	1200	550	4400	520	1400
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	67	80	150	61	55
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	67	70	65	68	67
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	680	290	500	320	320
Monoaromatics & Oxygenates								

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The results included within the report relate only to the sample(s) submitted for testing.

Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934531	1934532	1934533	1934534	1934535
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	18	< 2.0	12	< 2.0	7.2
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	35	< 8.0	21	< 8.0	28
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	180	320	92	210	340
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	230	320	130	210	370
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	4.4	5.6	11	6.9	4.6
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	30	27	42	24	26
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	210	73	410	81	170
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	380	200	790	200	430
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	630	310	1300	310	630

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934531	1934532	1934533	1934534	1934535
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934531	1934532	1934533	1934534	1934535
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status					
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934531	1934532	1934533	1934534	1934535
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	2.7	1.8	2.4	2.3	1.4
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	0.61	< 0.05	1.3	0.27	0.59
Acenaphthene	mg/kg	0.05	MCERTS	7.4	1.6	6.2	3.6	2.9
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Fluorene	mg/kg	0.05	MCERTS	5.2	1.0	3.7	2.0	1.7
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	49	13	54	20	24
Anthracene	mg/kg	0.05	MCERTS	13	3.3	16	4.2	6.5
Carbazole	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	81	24	170	29	65
Pyrene	mg/kg	0.05	MCERTS	78	23	170	26	67
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	41	14	97	14	39
Chrysene	mg/kg	0.05	MCERTS	39	12	94	14	33
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	44	14	130	16	46
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	16	5.3	97	5.9	16
Benzo(a)pyrene	mg/kg	0.05	MCERTS	37	12	62	13	39

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934531	1934532	1934533	1934534	1934535
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	14	5.8	42	5.9	17
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	4.4	1.4	12	1.8	4.3
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	17	6.5	46	6.4	19
Acid Herbicides								
2,3,6-TBA	µg/kg	50	NONE	< 50	< 50	< 50	-	-
2,4,5-T	µg/kg	10	NONE	< 10	< 10	< 10	-	-
2,4,5-TP (Fenoprop)	µg/kg	10	NONE	< 10	< 10	< 10	-	-
2,4-D	µg/kg	10	NONE	< 10	< 10	< 10	-	-
2,4-DB	µg/kg	10	NONE	< 10	< 10	< 10	-	-
4-CPA	µg/kg	20	NONE	< 20	< 20	< 20	-	-
Bromacil	µg/kg	10	NONE	< 10	< 10	< 10	-	-
Bromoxynil	µg/kg	10	NONE	< 10	< 10	< 10	-	-
Clopyralid	µg/kg	100	NONE	< 100	< 100	< 100	-	-
Dicamba	µg/kg	20	NONE	< 20	< 20	< 20	-	-
Diclofop	µg/kg	10	NONE	< 10	< 10	< 10	-	-
Dichlorprop	µg/kg	10	NONE	< 10	< 10	< 10	-	-
Dinoseb	µg/kg	10	NONE	< 10	< 10	< 10	-	-
Flamprop	µg/kg	50	NONE	< 50	< 50	< 50	-	-
Flamprop-Isopropyl	µg/kg	10	NONE	< 10	< 10	< 10	-	-
Ioxynil	µg/kg	10	NONE	< 10	< 10	< 10	-	-
MCPA	µg/kg	10	NONE	< 10	< 10	< 10	-	-
MCPB	µg/kg	20	NONE	< 20	< 20	< 20	-	-
MCPP (Mecoprop)	µg/kg	10	NONE	< 10	< 10	< 10	-	-
Picloram	µg/kg	50	NONE	< 50	< 50	< 50	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934536	1934537	1934538	1934539	1934540
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	11	9.6	11	17	22
Total mass of sample received	kg	0.001	NONE	2.0	2.0	2.0	2.0	2.0
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
General Inorganics								
pH - Automated	pH Units	N/A	MCERTS	7.9	7.8	7.7	8.0	7.8
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	2.3	< 0.5	< 0.5	1.4	< 0.5
Total Organic Carbon (TOC)	%	0.1	MCERTS	6.3	5.8	8.1	6.4	7.4
Total Phenols								
Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Speciated PAHs								
Naphthalene	mg/kg	0.05	MCERTS	1.1	3.3	0.91	0.58	18
Acenaphthylene	mg/kg	0.05	MCERTS	0.69	0.95	0.35	< 0.05	28
Acenaphthene	mg/kg	0.05	MCERTS	3.1	11	1.4	2.0	85
Fluorene	mg/kg	0.05	MCERTS	1.9	6.3	0.97	1.2	50
Phenanthrene	mg/kg	0.05	MCERTS	22	68	12	11	540
Anthracene	mg/kg	0.05	MCERTS	5.1	17	3.3	2.4	130
Fluoranthene	mg/kg	0.05	MCERTS	43	140	28	17	760
Pyrene	mg/kg	0.05	MCERTS	42	130	29	16	710
Benzo(a)anthracene	mg/kg	0.05	MCERTS	22	83	15	6.7	320
Chrysene	mg/kg	0.05	MCERTS	22	64	14	6.3	270
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	24	94	19	7.3	310
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	11	23	7.6	2.9	150
Benzo(a)pyrene	mg/kg	0.05	MCERTS	22	72	16	6.4	320
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	9.8	31	8.2	2.8	150
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	2.7	9.5	2.2	0.74	32
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	11	35	9.3	3.3	180
Total PAH								
Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	243	781	166	86.1	4040
Heavy Metals / Metalloids								
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	76	66	83	16	60
Barium (aqua regia extractable)	mg/kg	1	MCERTS	330	410	310	56	360
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.8	1.9	1.4	1.2	1.7
Boron (water soluble)	mg/kg	0.2	MCERTS	1.0	0.3	0.9	1.3	0.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	3.4	2.8	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	63	64	81	44	56
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	64	64	82	45	56
Copper (aqua regia extractable)	mg/kg	1	MCERTS	320	290	340	38	330
Lead (aqua regia extractable)	mg/kg	1	MCERTS	1100	2100	1200	59	1400
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	70	70	73	39	60
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	85	82	76	69	71
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	390	480	460	110	990
Monoaromatics & Oxygenates								

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934536	1934537	1934538	1934539	1934540
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	9.9
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	14	< 2.0	< 2.0	27
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	16	59	21	< 8.0	81
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	270	290	330	< 8.0	480
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	290	360	350	< 10	600
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	3.8	5.1	< 1.0	< 1.0	46
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	19	31	8.3	23	230
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	110	340	78	52	1200
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	270	680	270	86	1000
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	400	1100	360	160	2500

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Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934536	1934537	1934538	1934539	1934540
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934536	1934537	1934538	1934539	1934540
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Analytical Report Number: 21-86295
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Lab Sample Number				1934536	1934537	1934538	1934539	1934540
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	1.1	3.3	0.91	0.58	18
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	29
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	0.69	0.95	0.35	< 0.05	28
Acenaphthene	mg/kg	0.05	MCERTS	3.1	11	1.4	2.0	85
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	25
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Fluorene	mg/kg	0.05	MCERTS	1.9	6.3	0.97	1.2	50
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	22	68	12	11	540
Anthracene	mg/kg	0.05	MCERTS	5.1	17	3.3	2.4	130
Carbazole	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	43	140	28	17	760
Pyrene	mg/kg	0.05	MCERTS	42	130	29	16	710
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	22	83	15	6.7	320
Chrysene	mg/kg	0.05	MCERTS	22	64	14	6.3	270
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	24	94	19	7.3	310
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	11	23	7.6	2.9	150
Benzo(a)pyrene	mg/kg	0.05	MCERTS	22	72	16	6.4	320

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Your Order No: PC2387 103 100

Lab Sample Number				1934536	1934537	1934538	1934539	1934540
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	9.8	31	8.2	2.8	150
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	2.7	9.5	2.2	0.74	32
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	11	35	9.3	3.3	180
Acid Herbicides								
2,3,6-TBA	µg/kg	50	NONE	-	-	-	-	-
2,4,5-T	µg/kg	10	NONE	-	-	-	-	-
2,4,5-TP (Fenoprop)	µg/kg	10	NONE	-	-	-	-	-
2,4-D	µg/kg	10	NONE	-	-	-	-	-
2,4-DB	µg/kg	10	NONE	-	-	-	-	-
4-CPA	µg/kg	20	NONE	-	-	-	-	-
Bromacil	µg/kg	10	NONE	-	-	-	-	-
Bromoxynil	µg/kg	10	NONE	-	-	-	-	-
Clopyralid	µg/kg	100	NONE	-	-	-	-	-
Dicamba	µg/kg	20	NONE	-	-	-	-	-
Diclofop	µg/kg	10	NONE	-	-	-	-	-
Dichlorprop	µg/kg	10	NONE	-	-	-	-	-
Dinoseb	µg/kg	10	NONE	-	-	-	-	-
Flamprop	µg/kg	50	NONE	-	-	-	-	-
Flamprop-Isopropyl	µg/kg	10	NONE	-	-	-	-	-
Ioxynil	µg/kg	10	NONE	-	-	-	-	-
MCPA	µg/kg	10	NONE	-	-	-	-	-
MCPB	µg/kg	20	NONE	-	-	-	-	-
MCPP (Mecoprop)	µg/kg	10	NONE	-	-	-	-	-
Picloram	µg/kg	50	NONE	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934541
Sample Reference				HP Dup 1
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Stone Content	%	0.1	NONE	< 0.1
Moisture Content	%	0.01	NONE	15
Total mass of sample received	kg	0.001	NONE	1.3
Asbestos in Soil	Type	N/A	ISO 17025	Not-detected

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.9
Ammoniacal Nitrogen as N	mg/kg	0.5	MCERTS	< 0.5
Total Organic Carbon (TOC)	%	0.1	MCERTS	7.1

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	12
Acenaphthylene	mg/kg	0.05	MCERTS	23
Acenaphthene	mg/kg	0.05	MCERTS	73
Fluorene	mg/kg	0.05	MCERTS	44
Phenanthrene	mg/kg	0.05	MCERTS	450
Anthracene	mg/kg	0.05	MCERTS	100
Fluoranthene	mg/kg	0.05	MCERTS	660
Pyrene	mg/kg	0.05	MCERTS	600
Benzo(a)anthracene	mg/kg	0.05	MCERTS	310
Chrysene	mg/kg	0.05	MCERTS	220
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	310
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	96
Benzo(a)pyrene	mg/kg	0.05	MCERTS	280
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	130
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	28
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	160

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	3490

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	62
Barium (aqua regia extractable)	mg/kg	1	MCERTS	280
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.5
Boron (water soluble)	mg/kg	0.2	MCERTS	0.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2
Chromium (III)	mg/kg	1	NONE	51
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	51
Copper (aqua regia extractable)	mg/kg	1	MCERTS	310
Lead (aqua regia extractable)	mg/kg	1	MCERTS	1000
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	61
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	70
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	790

Monoaromatics & Oxygenates

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934541
Sample Reference				HP Dup 1
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Benzene	µg/kg	1	MCERTS	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0
p & m-xylene	µg/kg	1	MCERTS	< 1.0
o-xylene	µg/kg	1	MCERTS	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0
Petroleum Hydrocarbons				
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	10
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	23
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	110
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	730
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	MCERTS	870
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	23
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	170
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	1300
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	1300
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	MCERTS	2700

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934541
Sample Reference				HP Dup 1
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
VOCs				
Chloromethane	µg/kg	1	ISO 17025	< 1.0
Chloroethane	µg/kg	1	NONE	< 1.0
Bromomethane	µg/kg	1	ISO 17025	< 1.0
Vinyl Chloride	µg/kg	1	NONE	< 1.0
Trichlorofluoromethane	µg/kg	1	NONE	< 1.0
1,1-Dichloroethene	µg/kg	1	NONE	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	ISO 17025	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	MCERTS	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0
1,1-Dichloroethane	µg/kg	1	MCERTS	< 1.0
2,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0
Trichloromethane	µg/kg	1	MCERTS	< 1.0
1,1,1-Trichloroethane	µg/kg	1	MCERTS	< 1.0
1,2-Dichloroethane	µg/kg	1	MCERTS	< 1.0
1,1-Dichloropropene	µg/kg	1	MCERTS	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	NONE	< 1.0
Benzene	µg/kg	1	MCERTS	< 1.0
Tetrachloromethane	µg/kg	1	MCERTS	< 1.0
1,2-Dichloropropane	µg/kg	1	MCERTS	< 1.0
Trichloroethene	µg/kg	1	MCERTS	< 1.0
Dibromomethane	µg/kg	1	MCERTS	< 1.0
Bromodichloromethane	µg/kg	1	MCERTS	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	ISO 17025	< 1.0
Toluene	µg/kg	1	MCERTS	< 1.0
1,1,2-Trichloroethane	µg/kg	1	MCERTS	< 1.0
1,3-Dichloropropane	µg/kg	1	ISO 17025	< 1.0
Dibromochloromethane	µg/kg	1	ISO 17025	< 1.0
Tetrachloroethene	µg/kg	1	NONE	< 1.0
1,2-Dibromoethane	µg/kg	1	ISO 17025	< 1.0
Chlorobenzene	µg/kg	1	MCERTS	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0
Ethylbenzene	µg/kg	1	MCERTS	< 1.0
p & m-Xylene	µg/kg	1	MCERTS	< 1.0
Styrene	µg/kg	1	MCERTS	< 1.0
Tribromomethane	µg/kg	1	NONE	< 1.0
o-Xylene	µg/kg	1	MCERTS	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	MCERTS	< 1.0
Isopropylbenzene	µg/kg	1	MCERTS	< 1.0
Bromobenzene	µg/kg	1	MCERTS	< 1.0
n-Propylbenzene	µg/kg	1	ISO 17025	< 1.0
2-Chlorotoluene	µg/kg	1	MCERTS	< 1.0
4-Chlorotoluene	µg/kg	1	MCERTS	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0
tert-Butylbenzene	µg/kg	1	MCERTS	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	ISO 17025	< 1.0
sec-Butylbenzene	µg/kg	1	MCERTS	< 1.0
1,3-Dichlorobenzene	µg/kg	1	ISO 17025	< 1.0
p-Isopropyltoluene	µg/kg	1	ISO 17025	< 1.0
1,2-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0
1,4-Dichlorobenzene	µg/kg	1	MCERTS	< 1.0
Butylbenzene	µg/kg	1	MCERTS	< 1.0

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934541
Sample Reference				HP Dup 1
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
1,2-Dibromo-3-chloropropane	µg/kg	1	ISO 17025	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	MCERTS	< 1.0
Hexachlorobutadiene	µg/kg	1	MCERTS	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	ISO 17025	< 1.0

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Your Order No: PC2387 103 100

Lab Sample Number				1934541
Sample Reference				HP Dup 1
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
SVOCs				
Aniline	mg/kg	0.1	NONE	< 0.1
Phenol	mg/kg	0.2	ISO 17025	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	< 0.2
Isophorone	mg/kg	0.2	MCERTS	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	12
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	24
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	23
Acenaphthene	mg/kg	0.05	MCERTS	73
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	22
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2
Fluorene	mg/kg	0.05	MCERTS	44
Azobenzene	mg/kg	0.3	MCERTS	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	450
Anthracene	mg/kg	0.05	MCERTS	100
Carbazole	mg/kg	0.3	MCERTS	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	660
Pyrene	mg/kg	0.05	MCERTS	600
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	310
Chrysene	mg/kg	0.05	MCERTS	220
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	310
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	96
Benzo(a)pyrene	mg/kg	0.05	MCERTS	280

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934541
Sample Reference				HP Dup 1
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Soil Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	130
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	28
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	160
Acid Herbicides				
2,3,6-TBA	µg/kg	50	NONE	-
2,4,5-T	µg/kg	10	NONE	-
2,4,5-TP (Fenoprop)	µg/kg	10	NONE	-
2,4-D	µg/kg	10	NONE	-
2,4-DB	µg/kg	10	NONE	-
4-CPA	µg/kg	20	NONE	-
Bromacil	µg/kg	10	NONE	-
Bromoxynil	µg/kg	10	NONE	-
Clopyralid	µg/kg	100	NONE	-
Dicamba	µg/kg	20	NONE	-
Diclofop	µg/kg	10	NONE	-
Dichlorprop	µg/kg	10	NONE	-
Dinoseb	µg/kg	10	NONE	-
Flamprop	µg/kg	50	NONE	-
Flamprop-Isopropyl	µg/kg	10	NONE	-
Ioxynil	µg/kg	10	NONE	-
MCPA	µg/kg	10	NONE	-
MCPB	µg/kg	20	NONE	-
MCPP (Mecoprop)	µg/kg	10	NONE	-
Picloram	µg/kg	50	NONE	-

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934564
Sample Reference				SW101
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
General Inorganics				
pH	pH Units	N/A	ISO 17025	7.6
Sulphate as SO4	mg/l	0.045	ISO 17025	16.3
Ammoniacal Nitrogen as N	µg/l	15	ISO 17025	120
Dissolved Organic Carbon (DOC)	mg/l	0.1	ISO 17025	4.16
Alkalinity as CaCO3	mg/l	3	ISO 17025	54
Phenols by GC-MS				
Phenol	µg/l	0.05	NONE	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05
Total Phenols				
Total Phenols (GC-MS)	µg/l	0.5	NONE	< 0.5
Heavy Metals / Metalloids				
Boron (dissolved)	µg/l	10	ISO 17025	120
Calcium (dissolved)	mg/l	0.012	ISO 17025	21
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0
Chromium (III)	µg/l	1	NONE	1.4
Arsenic (dissolved)	µg/l	0.15	ISO 17025	2.71
Barium (dissolved)	µg/l	0.06	ISO 17025	60
Beryllium (dissolved)	µg/l	0.1	ISO 17025	< 0.1
Cadmium (dissolved)	µg/l	0.02	ISO 17025	< 0.02
Chromium (dissolved)	µg/l	0.2	ISO 17025	1.4
Copper (dissolved)	µg/l	0.5	ISO 17025	8.8
Lead (dissolved)	µg/l	0.2	ISO 17025	8.4
Mercury (dissolved)	µg/l	0.05	ISO 17025	< 0.05
Nickel (dissolved)	µg/l	0.5	ISO 17025	2.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	< 0.6
Vanadium (dissolved)	µg/l	0.2	ISO 17025	1.4
Zinc (dissolved)	µg/l	0.5	ISO 17025	25
Monoaromatics & Oxygenates				
Benzene	µg/l	1	ISO 17025	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934564
Sample Reference				SW101
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Petroleum Hydrocarbons				
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934564
Sample Reference				SW101
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
VOCs				
Chloromethane	µg/l	1	ISO 17025	< 1.0
Chloroethane	µg/l	1	ISO 17025	< 1.0
Bromomethane	µg/l	1	ISO 17025	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0
Trichlorofluoromethane	µg/l	1	NONE	< 1.0
1,1-Dichloroethene	µg/l	1	ISO 17025	< 1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	ISO 17025	< 1.0
Cis-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	ISO 17025	< 1.0
1,1-Dichloroethane	µg/l	1	ISO 17025	< 1.0
2,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0
Trichloromethane	µg/l	1	ISO 17025	< 1.0
1,1,1-Trichloroethane	µg/l	1	ISO 17025	< 1.0
1,2-Dichloroethane	µg/l	1	ISO 17025	< 1.0
1,1-Dichloropropene	µg/l	1	ISO 17025	< 1.0
Trans-1,2-dichloroethene	µg/l	1	ISO 17025	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0
Tetrachloromethane	µg/l	1	ISO 17025	< 1.0
1,2-Dichloropropane	µg/l	1	ISO 17025	< 1.0
Trichloroethene	µg/l	1	ISO 17025	< 1.0
Dibromomethane	µg/l	1	ISO 17025	< 1.0
Bromodichloromethane	µg/l	1	ISO 17025	< 1.0
Cis-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0
Trans-1,3-dichloropropene	µg/l	1	ISO 17025	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0
1,1,2-Trichloroethane	µg/l	1	ISO 17025	< 1.0
1,3-Dichloropropane	µg/l	1	ISO 17025	< 1.0
Dibromochloromethane	µg/l	1	ISO 17025	< 1.0
Tetrachloroethene	µg/l	1	ISO 17025	< 1.0
1,2-Dibromoethane	µg/l	1	ISO 17025	< 1.0
Chlorobenzene	µg/l	1	ISO 17025	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0
p & m-Xylene	µg/l	1	ISO 17025	< 1.0
Styrene	µg/l	1	ISO 17025	< 1.0
Tribromomethane	µg/l	1	ISO 17025	< 1.0
o-Xylene	µg/l	1	ISO 17025	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	ISO 17025	< 1.0
Isopropylbenzene	µg/l	1	ISO 17025	< 1.0
Bromobenzene	µg/l	1	ISO 17025	< 1.0
n-Propylbenzene	µg/l	1	ISO 17025	< 1.0
2-Chlorotoluene	µg/l	1	ISO 17025	< 1.0
4-Chlorotoluene	µg/l	1	ISO 17025	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0
tert-Butylbenzene	µg/l	1	ISO 17025	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	ISO 17025	< 1.0
sec-Butylbenzene	µg/l	1	ISO 17025	< 1.0
1,3-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0
p-Isopropyltoluene	µg/l	1	ISO 17025	< 1.0
1,2-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0
1,4-Dichlorobenzene	µg/l	1	ISO 17025	< 1.0
Butylbenzene	µg/l	1	ISO 17025	< 1.0

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934564
Sample Reference				SW101
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
1,2-Dibromo-3-chloropropane	µg/l	1	ISO 17025	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0
Hexachlorobutadiene	µg/l	1	ISO 17025	< 1.0
1,2,3-Trichlorobenzene	µg/l	1	ISO 17025	< 1.0

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934564
Sample Reference				SW101
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
SVOCs				
Aniline	µg/l	0.05	NONE	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05
Naphthalene	µg/l	0.01	ISO 17025	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05
Acenaphthylene	µg/l	0.01	ISO 17025	< 0.01
Acenaphthene	µg/l	0.01	ISO 17025	0.02
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05
Fluorene	µg/l	0.01	ISO 17025	0.03
Azobenzene	µg/l	0.05	NONE	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05
Hexachlorobenzene	µg/l	0.05	NONE	< 0.05
Phenanthrene	µg/l	0.01	ISO 17025	< 0.01
Anthracene	µg/l	0.01	ISO 17025	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05
Fluoranthene	µg/l	0.01	ISO 17025	0.02
Pyrene	µg/l	0.01	ISO 17025	0.01
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05
Benzo(a)anthracene	µg/l	0.01	ISO 17025	< 0.01
Chrysene	µg/l	0.01	ISO 17025	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	< 0.01
Benzo(a)pyrene	µg/l	0.01	ISO 17025	< 0.01

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934564
Sample Reference				SW101
Sample Number				None Supplied
Depth (m)				None Supplied
Date Sampled				08/07/2021
Time Taken				None Supplied
Analytical Parameter (Water Analysis)	**Units**	**Limit of detection**	**Accreditation Status**	
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	< 0.01
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	< 0.01

3&4-Methylphenol	µg/l	0.1	NONE	< 0.10

Environmental Forensics

Fluoranthene (low level)	µg/l	0.002	NONE	0.020
Benzo(b)fluoranthene (low level)	µg/l	0.002	NONE	< 0.002
Benzo(k)fluoranthene (low level)	µg/l	0.002	NONE	< 0.002
Benzo(a)pyrene (low level)	µg/l	0.002	NONE	< 0.002
Indeno(1,2,3-cd)pyrene (low level)	µg/l	0.002	NONE	< 0.002
Benzo(ghi)perylene (low level)	µg/l	0.002	NONE	< 0.002
Naphthalene (low level)	µg/l	0.002	NONE	< 0.0020
Acenaphthylene (low level)	µg/l	0.002	NONE	< 0.0020
Acenaphthene (low level)	µg/l	0.002	NONE	0.020
Fluorene (low level)	µg/l	0.002	NONE	0.030
Phenanthrene (low level)	µg/l	0.002	NONE	< 0.0020
Antracene (low level)	µg/l	0.002	NONE	< 0.0020
Pyrene (low level)	µg/l	0.002	NONE	0.010
Benzo(a)anthracene (low level)	µg/l	0.002	NONE	< 0.0020
Chrysene (low level)	µg/l	0.002	NONE	< 0.0020
Di-bezno(a,h)anthracene (low level)	µg/l	0.002	NONE	< 0.0020

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934552	1934553	1934554	1934555	1934556
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.7	7.9	8.0	8.0	7.9
Sulphate as SO4	mg/l	0.1	ISO 17025	4.2	3.0	3.5	3.0	4.5
Ammoniacal Nitrogen as N	µg/l	15	NONE	34	35	< 15	< 15	< 15
Alkalinity as CaCO3	mg/l	3	ISO 17025	86	56	69	110	77
Phenols by GC-MS								
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Phenols								
Total Phenols (GC-MS)	µg/l	0.5	NONE	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	1	ISO 17025	2.8	< 1.0	4.2	< 1.0	< 1.0
Barium (dissolved)	µg/l	0.05	ISO 17025	92	45	130	95	140
Beryllium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2	0.4	< 0.2	0.4
Boron (dissolved)	µg/l	10	ISO 17025	28	16	18	23	17
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.4	ISO 17025	0.4	< 0.4	< 0.4	0.6	0.4
Copper (dissolved)	µg/l	0.7	ISO 17025	24	20	6.8	8.2	6.7
Lead (dissolved)	µg/l	1	ISO 17025	5.6	2.3	5.2	2.1	9.6
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	3.7	1.6	2.7	2.6	2.6
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	ISO 17025	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Zinc (dissolved)	µg/l	0.4	ISO 17025	28	6.0	3.8	4.3	3.4
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934552	1934553	1934554	1934555	1934556
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C10 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C10 - C35	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934552	1934553	1934554	1934555	1934556
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ter-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
P-Isopropyltoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934552	1934553	1934554	1934555	1934556
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,2,4-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,3-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934552	1934553	1934554	1934555	1934556
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	NONE	< 0.01	< 0.01	0.02	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	NONE	0.07	0.07	0.10	0.05	0.12
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/l	0.01	NONE	0.08	0.07	0.07	0.05	0.06
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Phenanthrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	0.09
Anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	0.06
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	NONE	0.16	0.08	0.39	0.03	0.14
Pyrene	µg/l	0.01	NONE	0.16	0.07	0.40	0.03	0.16
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	NONE	0.07	0.04	0.13	< 0.01	0.11
Chrysene	µg/l	0.01	NONE	0.05	0.02	0.12	< 0.01	0.07
Benzo(b)fluoranthene	µg/l	0.01	NONE	0.05	< 0.01	0.12	< 0.01	0.11
Benzo(k)fluoranthene	µg/l	0.01	NONE	0.03	< 0.01	0.05	< 0.01	0.10
Benzo(a)pyrene	µg/l	0.01	NONE	0.05	< 0.01	0.10	< 0.01	0.14

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934552	1934553	1934554	1934555	1934556
Sample Reference				HP101	HP102	HP103	HP104	HP105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	0.04	< 0.01	0.07
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	0.02
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01	0.07	< 0.01	0.10
Phenyl Urea Pesticides								
Benazolin	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	-	-
Bromoxynil	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	-	-
Clopyralid	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	-	-
Environmental Forensics								
Fluoranthene (low level)	µg/l	0.002	NONE	0.16	0.080	0.39	0.030	0.14
Benzo(b)fluoranthene (low level)	µg/l	0.002	NONE	0.050	< 0.002	0.12	< 0.002	0.11
Benzo(k)fluoranthene (low level)	µg/l	0.002	NONE	0.030	< 0.002	0.050	< 0.002	0.10
Benzo(a)pyrene (low level)	µg/l	0.002	NONE	0.050	< 0.002	0.10	< 0.002	0.14
Indeno(1,2,3-cd)pyrene (low level)	µg/l	0.002	NONE	< 0.002	< 0.002	0.040	< 0.002	0.070
Benzo(ghi)perylene (low level)	µg/l	0.002	NONE	< 0.002	< 0.002	0.070	< 0.002	0.10
Naphthalene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acenaphthylene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	0.020	< 0.0020	< 0.0020
Acenaphthene (low level)	µg/l	0.002	NONE	0.070	0.070	0.10	0.050	0.12
Fluorene (low level)	µg/l	0.002	NONE	0.080	0.070	0.070	0.050	0.060
Phenanthrene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.090
Antracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.060
Pyrene (low level)	µg/l	0.002	NONE	0.16	0.070	0.40	0.030	0.16
Benzo(a)anthracene (low level)	µg/l	0.002	NONE	0.070	0.040	0.13	< 0.0020	0.11
Chrysene (low level)	µg/l	0.002	NONE	0.050	0.020	0.12	< 0.0020	0.070
Di-bezno(a,h)anthracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.020
Acid Herbicides								
2,4,5-T	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
2,4,5-TP	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
2,4-D	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
2,4-DB	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
Dicamba	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
Dichlorprop	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
Dinoseb	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
MCPA	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
MCPB	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
MCPP (Mecoprop)	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
Picloram	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-
Bentazone	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934557	1934558	1934559	1934560	1934561
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	8.1	8.1	7.9	7.9	8.0
Sulphate as SO4	mg/l	0.1	ISO 17025	2.5	2.4	2.5	3.5	7.6
Ammoniacal Nitrogen as N	µg/l	15	NONE	< 15	< 15	42	< 15	16
Alkalinity as CaCO3	mg/l	3	ISO 17025	81	66	77	110	72
Phenols by GC-MS								
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Phenols								
Total Phenols (GC-MS)	µg/l	0.5	NONE	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	1	ISO 17025	< 1.0	< 1.0	5.4	5.5	< 1.0
Barium (dissolved)	µg/l	0.05	ISO 17025	93	110	73	180	95
Beryllium (dissolved)	µg/l	0.2	ISO 17025	0.4	0.3	< 0.2	< 0.2	< 0.2
Boron (dissolved)	µg/l	10	ISO 17025	18	16	21	20	18
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.4	ISO 17025	0.5	0.5	0.6	< 0.4	0.5
Copper (dissolved)	µg/l	0.7	ISO 17025	5.2	11	17	7.2	9.1
Lead (dissolved)	µg/l	1	ISO 17025	2.6	7.7	7.0	4.1	5.9
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	1.8	2.7	2.4	2.6	2.2
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	ISO 17025	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Zinc (dissolved)	µg/l	0.4	ISO 17025	3.4	3.8	8.5	3.7	6.8
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934557	1934558	1934559	1934560	1934561
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C10 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C10 - C35	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934557	1934558	1934559	1934560	1934561
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ter-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
P-Isopropyltoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934557	1934558	1934559	1934560	1934561
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,2,4-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,3-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934557	1934558	1934559	1934560	1934561
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	NONE	0.07	0.08	0.05	0.24	0.04
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/l	0.01	NONE	0.05	0.06	0.05	0.10	0.03
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Phenanthrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	0.46	< 0.01
Anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	0.14	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	NONE	0.11	0.62	0.08	1.6	0.21
Pyrene	µg/l	0.01	NONE	0.12	0.72	0.08	1.8	0.20
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	NONE	0.05	0.27	< 0.01	0.58	0.09
Chrysene	µg/l	0.01	NONE	0.05	0.30	< 0.01	0.60	0.07
Benzo(b)fluoranthene	µg/l	0.01	NONE	0.05	0.34	< 0.01	0.89	0.11
Benzo(k)fluoranthene	µg/l	0.01	NONE	0.03	0.18	< 0.01	0.36	0.05
Benzo(a)pyrene	µg/l	0.01	NONE	0.05	0.32	< 0.01	0.81	0.11

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934557	1934558	1934559	1934560	1934561
Sample Reference				HP106	HP107	HP108	HP109	HP110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	0.14	< 0.01	0.42	0.09
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	0.05	< 0.01	0.14	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	0.22	< 0.01	0.64	0.13
Phenyl Urea Pesticides								
Benazolin	µg/l	0.01	NONE	-	-	-	-	-
Bromoxynil	µg/l	0.01	NONE	-	-	-	-	-
Clopyralid	µg/l	0.01	NONE	-	-	-	-	-
Environmental Forensics								
Fluoranthene (low level)	µg/l	0.002	NONE	0.11	0.62	0.080	1.6	0.21
Benzo(b)fluoranthene (low level)	µg/l	0.002	NONE	0.050	0.34	< 0.002	0.89	0.11
Benzo(k)fluoranthene (low level)	µg/l	0.002	NONE	0.030	0.18	< 0.002	0.36	0.050
Benzo(a)pyrene (low level)	µg/l	0.002	NONE	0.050	0.32	< 0.002	0.81	0.11
Indeno(1,2,3-cd)pyrene (low level)	µg/l	0.002	NONE	< 0.002	0.14	< 0.002	0.42	0.090
Benzo(ghi)perylene (low level)	µg/l	0.002	NONE	< 0.002	0.22	< 0.002	0.64	0.13
Naphthalene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acenaphthylene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acenaphthene (low level)	µg/l	0.002	NONE	0.070	0.080	0.050	0.24	0.040
Fluorene (low level)	µg/l	0.002	NONE	0.050	0.060	0.050	0.10	0.030
Phenanthrene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	0.46	< 0.0020
Antracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	0.14	< 0.0020
Pyrene (low level)	µg/l	0.002	NONE	0.12	0.72	0.080	1.8	0.20
Benzo(a)anthracene (low level)	µg/l	0.002	NONE	0.050	0.27	< 0.0020	0.58	0.090
Chrysene (low level)	µg/l	0.002	NONE	0.050	0.30	< 0.0020	0.60	0.070
Di-bezno(a,h)anthracene (low level)	µg/l	0.002	NONE	< 0.0020	0.050	< 0.0020	0.14	< 0.0020
Acid Herbicides								
2,4,5-T	µg/l	0.02	NONE	-	-	-	-	-
2,4,5-TP	µg/l	0.02	NONE	-	-	-	-	-
2,4-D	µg/l	0.02	NONE	-	-	-	-	-
2,4-DB	µg/l	0.02	NONE	-	-	-	-	-
Dicamba	µg/l	0.02	NONE	-	-	-	-	-
Dichlorprop	µg/l	0.02	NONE	-	-	-	-	-
Dinoseb	µg/l	0.02	NONE	-	-	-	-	-
MCPA	µg/l	0.02	NONE	-	-	-	-	-
MCPB	µg/l	0.02	NONE	-	-	-	-	-
MCPP (Mecoprop)	µg/l	0.02	NONE	-	-	-	-	-
Picloram	µg/l	0.02	NONE	-	-	-	-	-
Bentazone	µg/l	0.02	NONE	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934562	1934563	1935614	1935615	1935616
Sample Reference				HP Dup 1	HP Dup Ballast	HP101 B	HP102 B	HP103 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	0.00-0.25	0.00-0.30	0.00-0.15
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	8.0	7.5	7.3	7.7	7.4
Sulphate as SO4	mg/l	0.1	ISO 17025	7.7	0.9	1.1	1.1	1.6
Ammoniacal Nitrogen as N	µg/l	15	NONE	< 15	26	35	33	42
Alkalinity as CaCO3	mg/l	3	ISO 17025	71	6.5	< 3.0	6.5	< 3.0
Phenols by GC-MS								
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Phenols								
Total Phenols (GC-MS)	µg/l	0.5	NONE	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Barium (dissolved)	µg/l	0.05	ISO 17025	94	11	16	11	32
Beryllium (dissolved)	µg/l	0.2	ISO 17025	0.3	0.5	0.4	0.4	0.5
Boron (dissolved)	µg/l	10	ISO 17025	16	< 10	< 10	< 10	< 10
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	1.1
Chromium (dissolved)	µg/l	0.4	ISO 17025	0.6	0.4	0.5	0.6	1.1
Copper (dissolved)	µg/l	0.7	ISO 17025	12	1.6	7.2	3.7	5.9
Lead (dissolved)	µg/l	1	ISO 17025	5.5	4.7	9.8	1.4	23
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	2.8	2.4	3.5	2.5	3.4
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	ISO 17025	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Zinc (dissolved)	µg/l	0.4	ISO 17025	6.9	5.7	13	4.5	13
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934562	1934563	1935614	1935615	1935616
Sample Reference				HP Dup 1	HP Dup Ballast	HP101 B	HP102 B	HP103 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	0.00-0.25	0.00-0.30	0.00-0.15
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C16	µg/l	10	NONE	< 10	-	-	-	-
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C16	µg/l	10	NONE	< 10	-	-	-	-
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C10 - C16	µg/l	10	NONE	< 10	-	-	-	-
TPH-CWG - Aromatic >C10 - C35	µg/l	10	NONE	< 10	-	-	-	-
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

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Your Order No: PC2387 103 100

Lab Sample Number				1934562	1934563	1935614	1935615	1935616
Sample Reference				HP Dup 1	HP Dup Ballast	HP101 B	HP102 B	HP103 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	0.00-0.25	0.00-0.30	0.00-0.15
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ter-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
P-Isopropyltoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934562	1934563	1935614	1935615	1935616
Sample Reference				HP Dup 1	HP Dup Ballast	HP101 B	HP102 B	HP103 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	0.00-0.25	0.00-0.30	0.00-0.15
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,2,4-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,3-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Lab Sample Number				1934562	1934563	1935614	1935615	1935616
Sample Reference				HP Dup 1	HP Dup Ballast	HP101 B	HP102 B	HP103 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	0.00-0.25	0.00-0.30	0.00-0.15
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	NONE	0.03	0.04	0.04	0.02	0.06
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/l	0.01	NONE	0.02	0.03	0.03	0.02	0.03
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Phenanthrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	NONE	0.06	0.02	0.04	0.01	0.06
Pyrene	µg/l	0.01	NONE	0.08	0.02	0.04	0.02	0.07
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	NONE	0.07	< 0.01	< 0.01	< 0.01	0.04
Chrysene	µg/l	0.01	NONE	0.07	< 0.01	< 0.01	< 0.01	0.02
Benzo(b)fluoranthene	µg/l	0.01	NONE	0.09	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	NONE	0.07	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	NONE	0.09	< 0.01	< 0.01	< 0.01	< 0.01

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Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1934562	1934563	1935614	1935615	1935616
Sample Reference				HP Dup 1	HP Dup Ballast	HP101 B	HP102 B	HP103 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	0.00-0.25	0.00-0.30	0.00-0.15
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	0.05	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	0.07	< 0.01	< 0.01	< 0.01	< 0.01
Phenyl Urea Pesticides								
Benazolin	µg/l	0.01	NONE	-	-	-	-	-
Bromoxynil	µg/l	0.01	NONE	-	-	-	-	-
Clopyralid	µg/l	0.01	NONE	-	-	-	-	-
Environmental Forensics								
Fluoranthene (low level)	µg/l	0.002	NONE	0.060	0.020	0.040	0.010	0.060
Benzo(b)fluoranthene (low level)	µg/l	0.002	NONE	0.090	< 0.002	< 0.002	< 0.002	< 0.002
Benzo(k)fluoranthene (low level)	µg/l	0.002	NONE	0.070	< 0.002	< 0.002	< 0.002	< 0.002
Benzo(a)pyrene (low level)	µg/l	0.002	NONE	0.090	< 0.002	< 0.002	< 0.002	< 0.002
Indeno(1,2,3-cd)pyrene (low level)	µg/l	0.002	NONE	0.050	< 0.002	< 0.002	< 0.002	< 0.002
Benzo(ghi)perylene (low level)	µg/l	0.002	NONE	0.070	< 0.002	< 0.002	< 0.002	< 0.002
Naphthalene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acenaphthylene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acenaphthene (low level)	µg/l	0.002	NONE	0.030	0.040	0.040	0.020	0.060
Fluorene (low level)	µg/l	0.002	NONE	0.020	0.030	0.030	0.020	0.030
Phenanthrene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Antracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Pyrene (low level)	µg/l	0.002	NONE	0.080	0.020	0.040	0.020	0.070
Benzo(a)anthracene (low level)	µg/l	0.002	NONE	0.070	< 0.0020	< 0.0020	< 0.0020	0.040
Chrysene (low level)	µg/l	0.002	NONE	0.070	< 0.0020	< 0.0020	< 0.0020	0.020
Di-bezno(a,h)anthracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acid Herbicides								
2,4,5-T	µg/l	0.02	NONE	-	-	-	-	-
2,4,5-TP	µg/l	0.02	NONE	-	-	-	-	-
2,4-D	µg/l	0.02	NONE	-	-	-	-	-
2,4-DB	µg/l	0.02	NONE	-	-	-	-	-
Dicamba	µg/l	0.02	NONE	-	-	-	-	-
Dichlorprop	µg/l	0.02	NONE	-	-	-	-	-
Dinoseb	µg/l	0.02	NONE	-	-	-	-	-
MCPA	µg/l	0.02	NONE	-	-	-	-	-
MCPB	µg/l	0.02	NONE	-	-	-	-	-
MCPP (Mecoprop)	µg/l	0.02	NONE	-	-	-	-	-
Picloram	µg/l	0.02	NONE	-	-	-	-	-
Bentazone	µg/l	0.02	NONE	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935617	1935618	1935619	1935620	1935621
Sample Reference				HP104 B	HP105 B	HP106 B	HP107 B	HP108 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.20	0.00-0.30	0.00-0.30	0.00-0.30
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
General Inorganics								
pH	pH Units	N/A	ISO 17025	7.4	7.2	7.6	7.8	7.8
Sulphate as SO4	mg/l	0.1	ISO 17025	0.9	1.8	0.8	1.0	1.2
Ammoniacal Nitrogen as N	µg/l	15	NONE	29	48	19	38	50
Alkalinity as CaCO3	mg/l	3	ISO 17025	8.0	7.4	3.9	6.5	< 3.0
Phenols by GC-MS								
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Phenols								
Total Phenols (GC-MS)	µg/l	0.5	NONE	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Heavy Metals / Metalloids								
Arsenic (dissolved)	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Barium (dissolved)	µg/l	0.05	ISO 17025	9.8	17	8.8	17	14
Beryllium (dissolved)	µg/l	0.2	ISO 17025	0.3	0.2	< 0.2	< 0.2	< 0.2
Boron (dissolved)	µg/l	10	ISO 17025	< 10	< 10	< 10	< 10	< 10
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.4	ISO 17025	0.4	0.9	< 0.4	0.5	0.9
Copper (dissolved)	µg/l	0.7	ISO 17025	3.2	4.2	2.6	3.2	3.9
Lead (dissolved)	µg/l	1	ISO 17025	3.1	30	1.9	13	15
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	2.5	2.4	2.4	1.8	2.5
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	ISO 17025	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Zinc (dissolved)	µg/l	0.4	ISO 17025	7.2	7.3	12	11	14
Monoaromatics & Oxygenates								
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

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Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935617	1935618	1935619	1935620	1935621
Sample Reference				HP104 B	HP105 B	HP106 B	HP107 B	HP108 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.20	0.00-0.30	0.00-0.30	0.00-0.30
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Petroleum Hydrocarbons								
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C10 - C16	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C10 - C35	µg/l	10	NONE	-	-	-	-	-
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10	< 10	< 10	< 10

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Lab Sample Number				1935617	1935618	1935619	1935620	1935621
Sample Reference				HP104 B	HP105 B	HP106 B	HP107 B	HP108 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.20	0.00-0.30	0.00-0.30	0.00-0.30
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
VOCs								
Chloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ter-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
P-Isopropyltoluene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935617	1935618	1935619	1935620	1935621
Sample Reference				HP104 B	HP105 B	HP106 B	HP107 B	HP108 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.20	0.00-0.30	0.00-0.30	0.00-0.30
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
1,2,4-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,3-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

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Lab Sample Number				1935617	1935618	1935619	1935620	1935621
Sample Reference				HP104 B	HP105 B	HP106 B	HP107 B	HP108 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.20	0.00-0.30	0.00-0.30	0.00-0.30
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	Units	Limit of detection	Accreditation Status					
SVOCs								
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	NONE	0.02	0.06	0.03	0.02	0.02
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/l	0.01	NONE	0.02	0.04	0.03	0.02	0.03
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.02	NONE	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Phenanthrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	NONE	0.02	0.06	0.02	0.05	0.02
Pyrene	µg/l	0.01	NONE	0.02	0.07	0.02	0.05	0.03
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	NONE	< 0.01	0.04	< 0.01	< 0.01	< 0.01
Chrysene	µg/l	0.01	NONE	< 0.01	0.02	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935617	1935618	1935619	1935620	1935621
Sample Reference				HP104 B	HP105 B	HP106 B	HP107 B	HP108 B
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.00-0.30	0.00-0.20	0.00-0.30	0.00-0.30	0.00-0.30
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**					
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Phenyl Urea Pesticides								
Benazolin	µg/l	0.01	NONE	-	-	-	-	-
Bromoxynil	µg/l	0.01	NONE	-	-	-	-	-
Clopyralid	µg/l	0.01	NONE	-	-	-	-	-
Environmental Forensics								
Fluoranthene (low level)	µg/l	0.002	NONE	0.020	0.060	0.020	0.050	0.020
Benzo(b)fluoranthene (low level)	µg/l	0.002	NONE	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Benzo(k)fluoranthene (low level)	µg/l	0.002	NONE	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Benzo(a)pyrene (low level)	µg/l	0.002	NONE	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Indeno(1,2,3-cd)pyrene (low level)	µg/l	0.002	NONE	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Benzo(ghi)perylene (low level)	µg/l	0.002	NONE	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Naphthalene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acenaphthylene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acenaphthene (low level)	µg/l	0.002	NONE	0.020	0.060	0.030	0.020	0.020
Fluorene (low level)	µg/l	0.002	NONE	0.020	0.040	0.030	0.020	0.030
Phenanthrene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Antracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Pyrene (low level)	µg/l	0.002	NONE	0.20	0.070	0.020	0.050	0.030
Benzo(a)anthracene (low level)	µg/l	0.002	NONE	< 0.0020	0.040	< 0.0020	< 0.0020	< 0.0020
Chrysene (low level)	µg/l	0.002	NONE	< 0.0020	0.020	< 0.0020	< 0.0020	< 0.0020
Di-bezno(a,h)anthracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acid Herbicides								
2,4,5-T	µg/l	0.02	NONE	-	-	-	-	-
2,4,5-TP	µg/l	0.02	NONE	-	-	-	-	-
2,4-D	µg/l	0.02	NONE	-	-	-	-	-
2,4-DB	µg/l	0.02	NONE	-	-	-	-	-
Dicamba	µg/l	0.02	NONE	-	-	-	-	-
Dichlorprop	µg/l	0.02	NONE	-	-	-	-	-
Dinoseb	µg/l	0.02	NONE	-	-	-	-	-
MCPA	µg/l	0.02	NONE	-	-	-	-	-
MCPB	µg/l	0.02	NONE	-	-	-	-	-
MCPP (Mecoprop)	µg/l	0.02	NONE	-	-	-	-	-
Picloram	µg/l	0.02	NONE	-	-	-	-	-
Bentazone	µg/l	0.02	NONE	-	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935622	1935623
Sample Reference				HP109 B	HP110 B
Sample Number				None Supplied	None Supplied
Depth (m)				0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
General Inorganics					
pH	pH Units	N/A	ISO 17025	7.8	8.1
Sulphate as SO4	mg/l	0.1	ISO 17025	1.4	1.1
Ammoniacal Nitrogen as N	µg/l	15	NONE	43	45
Alkalinity as CaCO3	mg/l	3	ISO 17025	< 3.0	4.8
Phenols by GC-MS					
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
Total Phenols					
Total Phenols (GC-MS)	µg/l	0.5	NONE	< 0.5	< 0.5
Heavy Metals / Metalloids					
Arsenic (dissolved)	µg/l	1	ISO 17025	< 1.0	< 1.0
Barium (dissolved)	µg/l	0.05	ISO 17025	32	22
Beryllium (dissolved)	µg/l	0.2	ISO 17025	< 0.2	< 0.2
Boron (dissolved)	µg/l	10	ISO 17025	< 10	< 10
Cadmium (dissolved)	µg/l	0.08	ISO 17025	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	ISO 17025	< 5.0	< 5.0
Chromium (III)	µg/l	1	NONE	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.4	ISO 17025	0.9	0.9
Copper (dissolved)	µg/l	0.7	ISO 17025	4.7	7.5
Lead (dissolved)	µg/l	1	ISO 17025	19	7.9
Mercury (dissolved)	µg/l	0.5	ISO 17025	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	ISO 17025	3.3	2.8
Selenium (dissolved)	µg/l	4	ISO 17025	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	ISO 17025	< 1.7	< 1.7
Zinc (dissolved)	µg/l	0.4	ISO 17025	11	9.6
Monoaromatics & Oxygenates					
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	NONE	< 10	< 10

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Your Order No: PC2387 103 100

Lab Sample Number				1935622	1935623
Sample Reference				HP109 B	HP110 B
Sample Number				None Supplied	None Supplied
Depth (m)				0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Petroleum Hydrocarbons					
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C16	µg/l	10	NONE	-	-
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C5 - C7	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	ISO 17025	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C16	µg/l	10	NONE	-	-
TPH-CWG - Aromatic >C10 - C12	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C10 - C16	µg/l	10	NONE	-	-
TPH-CWG - Aromatic >C10 - C35	µg/l	10	NONE	-	-
TPH-CWG - Aromatic >C12 - C16	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	NONE	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	NONE	< 10	< 10

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Your Order No: PC2387 103 100

Lab Sample Number				1935622	1935623
Sample Reference				HP109 B	HP110 B
Sample Number				None Supplied	None Supplied
Depth (m)				0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
VOCs					
Chloromethane	µg/l	1	NONE	< 1.0	< 1.0
Chloroethane	µg/l	1	NONE	< 1.0	< 1.0
Bromomethane	µg/l	1	NONE	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	NONE	< 1.0	< 1.0
1,1-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/l	1	NONE	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	NONE	< 1.0	< 1.0
1,1-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0
Trichloromethane	µg/l	1	NONE	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0
1,2-dichloroethane	µg/l	1	NONE	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	NONE	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	NONE	< 1.0	< 1.0
Benzene	µg/l	1	ISO 17025	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	NONE	< 1.0	< 1.0
1,2-dichloropropane	µg/l	1	NONE	< 1.0	< 1.0
Trichloroethene	µg/l	1	NONE	< 1.0	< 1.0
Dibromomethane	µg/l	1	NONE	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	NONE	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	NONE	< 1.0	< 1.0
Toluene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	NONE	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	NONE	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	NONE	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	NONE	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	NONE	< 1.0	< 1.0
Chlorobenzene	µg/l	1	NONE	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0
Ethylbenzene	µg/l	1	ISO 17025	< 1.0	< 1.0
p & m-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0
Styrene	µg/l	1	NONE	< 1.0	< 1.0
Tribromomethane	µg/l	1	NONE	< 1.0	< 1.0
o-xylene	µg/l	1	ISO 17025	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	NONE	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	NONE	< 1.0	< 1.0
Bromobenzene	µg/l	1	NONE	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	NONE	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	NONE	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0
ter-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	NONE	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0
1,3-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0
P-Isopropyltoluene	µg/l	1	NONE	< 1.0	< 1.0
1,2-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0
1,4-dichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0
Butylbenzene	µg/l	1	NONE	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	NONE	< 1.0	< 1.0

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935622	1935623
Sample Reference				HP109 B	HP110 B
Sample Number				None Supplied	None Supplied
Depth (m)				0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
1,2,4-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	0.1	NONE	< 0.1	< 0.1
1,2,3-Trichlorobenzene	µg/l	1	NONE	< 1.0	< 1.0

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Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935622	1935623
Sample Reference				HP109 B	HP110 B
Sample Number				None Supplied	None Supplied
Depth (m)				0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
SVOCs					
Aniline	µg/l	0.05	NONE	< 0.05	< 0.05
Phenol	µg/l	0.05	NONE	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	NONE	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	NONE	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
Isophorone	µg/l	0.05	NONE	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	NONE	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
Naphthalene	µg/l	0.01	NONE	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	NONE	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	NONE	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	NONE	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	NONE	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	NONE	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	NONE	0.50	0.06
Acenaphthene	µg/l	0.01	NONE	0.30	0.06
2,4-Dinitrotoluene	µg/l	0.05	NONE	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	NONE	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	NONE	< 0.05	< 0.05
Fluorene	µg/l	0.01	NONE	0.10	0.03
Azobenzene	µg/l	0.05	NONE	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	NONE	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.02	NONE	< 0.02	< 0.02
Phenanthrene	µg/l	0.01	NONE	< 0.01	< 0.01
Anthracene	µg/l	0.01	NONE	< 0.01	< 0.01
Carbazole	µg/l	0.05	NONE	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	NONE	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	NONE	0.10	0.06
Pyrene	µg/l	0.01	NONE	0.10	0.06
Butyl benzyl phthalate	µg/l	0.05	NONE	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	NONE	0.10	0.10
Chrysene	µg/l	0.01	NONE	0.07	0.05
Benzo(b)fluoranthene	µg/l	0.01	NONE	0.10	0.07
Benzo(k)fluoranthene	µg/l	0.01	NONE	0.06	0.04
Benzo(a)pyrene	µg/l	0.01	NONE	0.09	0.07

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT

Your Order No: PC2387 103 100

Lab Sample Number				1935622	1935623
Sample Reference				HP109 B	HP110 B
Sample Number				None Supplied	None Supplied
Depth (m)				0.00-0.15	0.00-0.10
Date Sampled				08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied
Analytical Parameter (Leachate Analysis)	**Units**	**Limit of detection**	**Accreditation Status**		
Indeno(1,2,3-cd)pyrene	µg/l	0.01	NONE	0.04	0.04
Dibenz(a,h)anthracene	µg/l	0.01	NONE	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	NONE	0.08	0.05
Phenyl Urea Pesticides					
Benazolin	µg/l	0.01	NONE	-	-
Bromoxynil	µg/l	0.01	NONE	-	-
Clopyralid	µg/l	0.01	NONE	-	-
Environmental Forensics					
Fluoranthene (low level)	µg/l	0.002	NONE	0.10	0.060
Benzo(b)fluoranthene (low level)	µg/l	0.002	NONE	0.10	0.070
Benzo(k)fluoranthene (low level)	µg/l	0.002	NONE	0.060	0.040
Benzo(a)pyrene (low level)	µg/l	0.002	NONE	0.090	0.070
Indeno(1,2,3-cd)pyrene (low level)	µg/l	0.002	NONE	0.040	0.040
Benzo(ghi)perylene (low level)	µg/l	0.002	NONE	0.080	0.050
Naphthalene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020
Acenaphthylene (low level)	µg/l	0.002	NONE	0.050	0.060
Acenaphthene (low level)	µg/l	0.002	NONE	0.30	0.060
Fluorene (low level)	µg/l	0.002	NONE	0.10	0.030
Phenanthrene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020
Antracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020
Pyrene (low level)	µg/l	0.002	NONE	0.10	0.060
Benzo(a)anthracene (low level)	µg/l	0.002	NONE	0.10	0.10
Chrysene (low level)	µg/l	0.002	NONE	0.070	0.050
Di-bezno(a,h)anthracene (low level)	µg/l	0.002	NONE	< 0.0020	< 0.0020
Acid Herbicides					
2,4,5-T	µg/l	0.02	NONE	-	-
2,4,5-TP	µg/l	0.02	NONE	-	-
2,4-D	µg/l	0.02	NONE	-	-
2,4-DB	µg/l	0.02	NONE	-	-
Dicamba	µg/l	0.02	NONE	-	-
Dichlorprop	µg/l	0.02	NONE	-	-
Dinoseb	µg/l	0.02	NONE	-	-
MCPA	µg/l	0.02	NONE	-	-
MCPB	µg/l	0.02	NONE	-	-
MCPP (Mecoprop)	µg/l	0.02	NONE	-	-
Picloram	µg/l	0.02	NONE	-	-
Bentazone	µg/l	0.02	NONE	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934542	1934543	1934544	1934545	1934546
Sample Reference				PS101	PS102	PS103	PS104	PS105
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Cadmium (aqua regia extractable in "other")	mg/kg	0.2	NONE	6.6	4.1	< 0.2	4.5	10
Chromium (aqua regia extractable in "other")	mg/kg	1	NONE	190	130	120	290	310
Lead (aqua regia extractable in "other")	mg/kg	1	NONE	62000	55000	57000	57000	61000
Nickel (aqua regia extractable in "other")	mg/kg	1	NONE	30	22	13	25	15
Zinc (aqua regia extractable in "other")	mg/kg	1	NONE	4800	5400	1200	5800	4600

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number: 21-86295
Project / Site name: Castlefield Viaduct NT
Your Order No: PC2387 103 100

Lab Sample Number				1934547	1934548	1934549	1934550	1934551
Sample Reference				PS106	PS107	PS108	PS109	PS110
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Date Sampled				08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter	**Units**	**Limit of detection**	**Accreditation Status**					
Heavy Metals / Metalloids								
Cadmium (aqua regia extractable in "other")	mg/kg	0.2	NONE	2.1	3.0	2.6	5.7	3.0
Chromium (aqua regia extractable in "other")	mg/kg	1	NONE	110	220	200	250	240
Lead (aqua regia extractable in "other")	mg/kg	1	NONE	59000	61000	62000	58000	66000
Nickel (aqua regia extractable in "other")	mg/kg	1	NONE	12	18	22	15	20
Zinc (aqua regia extractable in "other")	mg/kg	1	NONE	1200	2200	2400	6500	1500

U/S = Unsuitable Sample I/S = Insufficient Sample

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Analytical Report Number : 21-86295
Project / Site name: Castlefield Viaduct NT

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1934531	HP101	None Supplied	0.00-0.25	Brown loam with gravel and vegetation.
1934532	HP102	None Supplied	0.00-0.30	Brown loam with gravel and vegetation.
1934533	HP103	None Supplied	0.00-0.15	Brown loam with gravel and vegetation.
1934534	HP104	None Supplied	0.00-0.30	Brown loam with gravel and vegetation.
1934535	HP105	None Supplied	0.00-0.20	Brown loam with gravel and vegetation.
1934536	HP106	None Supplied	0.00-0.30	Brown loam with gravel and vegetation.
1934537	HP107	None Supplied	0.00-0.30	Brown loam with gravel and vegetation.
1934538	HP108	None Supplied	0.00-0.30	Brown loam with gravel and vegetation.
1934539	HP109	None Supplied	0.00-0.15	Brown clay and loam with gravel and vegetation.
1934540	HP110	None Supplied	0.00-0.10	Brown clay and loam with gravel and vegetation.
1934541	HP Dup 1	None Supplied	None Supplied	Brown clay and loam with gravel and vegetation.

Analytical Report Number : 21-86295
Project / Site name: Castlefield Viaduct NT

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Metals in water by ICP-OES (dissolved)	Determination of metals in water by acidification followed by ICP-OES. Accredited Matrices SW, GW, PW, PrW.(Al, Cu,Fe,Zn).	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Metals in water by ICP-MS (dissolved)	Determination of metals in water by acidification followed by ICP-MS. Accredited Matrices: SW, GW, PW except B=SW,GW, Hg=SW,PW, Al=SW,PW.	In-house method based on USEPA Method 6020 & 200.8 "for the determination of trace elements in water by ICP-MS.	L012-PL	W	ISO 17025
BS EN 12457-1 (2:1) Leachate Prep	2:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-1.	L043-PL	W	NONE
TPHCWG (Leachates)	Determination of dichloromethane extractable hydrocarbons in leachate by GC-MS.	In-house method	L070-PL	W	NONE
Phenols, speciated, in leachate, by GCMS	Determination of speciated phenols in leachate by extraction in hexane followed by GC-MS.	In-house method based on USEPA 8270	L070-PL	W	NONE
Phenols, speciated, in water, by GCMS	Determination of speciated phenols in water by extraction in hexane followed by GC-MS.	In-house method based on USEPA 8270	L070-PL	W	NONE
Alkalinity in Leachate	Determination of Alkalinity by discreet analyser (colorimetry).	In house method based on MEWAM & USEPA Method 310.2.	L082-PL	W	ISO 17025
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Metals by ICP-OES in leachate	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Boron in leachate	Determination of boron in leachate. Sample acidified and followed by ICP-OES.	In-house method based on MEWAM	L039-PL	W	ISO 17025
Boron in water	Determination of boron in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW	In-house method based on MEWAM	L039-PL	W	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Hexavalent chromium in leachate	Determination of hexavalent chromium in leachate by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	ISO 17025
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Hexavalent chromium in water	Determination of hexavalent chromium in water by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method by continuous flow analyser. Accredited Matrices SW, GW, PW.	L080-PL	W	ISO 17025
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE

Analytical Report Number : 21-86295
Project / Site name: Castlefield Viaduct NT

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
pH at 20oC in leachate	Determination of pH in leachate by electrometric measurement.	In house method.	L005-PL	W	ISO 17025
Sulphate in water	Determination of sulphate in water by acidification followed by ICP-OES. Accredited matrices: SW PW GW, PrW.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L039-PL	W	ISO 17025
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in leachate	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L070-PL	W	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Semi-volatile organic compounds in water	Determination of semi-volatile organic compounds in leachate by extraction in dichloromethane followed by GC-MS.	In-house method based on USEPA 8270	L102B-PL	W	NONE
TPHCWG (Waters)	Determination of dichloromethane extractable hydrocarbons in water by GC-MS, speciation by interpretation.	In-house method	L070-PL	W	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Volatile organic compounds in leachate	Determination of volatile organic compounds in leachate by headspace GC-MS	In-house method based on USEPA8260	L073B-PL	W	NONE
Volatile organic compounds in soil	Determination of volatile organic compounds in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Volatile organic compounds in water	Determination of volatile organic compounds in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Dissolved Organic Carbon in water	Determination of dissolved inorganic carbon in water by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	ISO 17025
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
BTEX and MTBE in water (Monoaromatics)	Determination of BTEX and MTBE in water by headspace GC-MS. Accredited matrices: SW PW GW	In-house method based on USEPA8260	L073B-PL	W	ISO 17025

Analytical Report Number : 21-86295
Project / Site name: Castlefield Viaduct NT

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BTEX and MTBE in leachates (Monoaromatics)	Determination of BTEX and MTBE in leachates by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	ISO 17025
Ammoniacal Nitrogen as N in leachate	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	NONE
Ammoniacal Nitrogen as N in soil	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method,10:1 water extraction.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	MCERTS
Ammoniacal Nitrogen as N in water	Determination of Ammonium/Ammonia/ Ammoniacal Nitrogen by the discrete analyser (colorimetric) salicylate/nitroprusside method. Accredited matrices SW, GW, PW.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L082-PL	W	ISO 17025
Metals in "other" type samples by ICP-OES	Determination of metals in "other" type sample by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L038-PL	D	NONE
Cr (III) in water	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
Cr (III) in soil	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
Cr (III) in leachate	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
TO - Acid herbs in leachate by LC-MS/MS	Determination of Acid herbicides in leachates by LC-MS/MS	In-house method		W	NONE
Phenyl Urea Pesticides in leachates	Not to be used until confirmed with TP/CS	Subcontracted analysis		W	NONE
pH at 20oC in water (automated)	Determination of pH in water by electrometric measurement. Accredited matrices: SW PW GW	In house method.	L099-PL	W	ISO 17025
low level PAHs in water	Determination of low level PAH compounds in water by extraction in dichloromethane followed by GC-MS with the use os surrogate and internal standards.	In-house method	L102B-PL	W	NONE
low level PAHs in leachate	Determination of low level PAH compounds in leachate by extraction in dichloromethane followed by GC-MS with the use of surrogate and internal standards.	In-house method	L102B-PL	W	NONE
Acid Herbicides by LC-MS	Detemination of Acid Herbicides by LC MS	In-house method	L057B-PL	W	NONE
Sulphate in leachates	Determination of sulphate in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
D.O. for Gravimetric Quant if Screen/ID positive	Dependent option for Gravimetric Quant if Screen/ID positive scheduled.	In house asbestos methods A001 & A006.	A006-PL	D	NONE

Analytical Report Number : 21-86295
Project / Site name: Castlefield Viaduct NT

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Alkalinity in Water (by discreet analyser)	Determination of Alkalinity by discreet analyser (colorimetry). Accredited matrices: SW, PW, GW.	In house method based on MEWAM & USEPA Method 310.2.	L082-PL	W	ISO 17025

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Unless otherwise indicated, site information, order number, project number, sampling date, time, sample reference and depth are provided by the client. The instructed on date indicates the date on which this information was provided to the laboratory.

Sample Deviation Report

Analytical Report Number : 21-86295
Project / Site name: Castlefield Viaduct NT

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
HP Dup 1	None Supplied	L	1934562	b	low level PAHs in leachate	L102B-PL	b
HP Dup Ballast	None Supplied	L	1934563	b	low level PAHs in leachate	L102B-PL	b
HP101	None Supplied	L	1934552	b	low level PAHs in leachate	L102B-PL	b
HP101 B	None Supplied	L	1935614	b	low level PAHs in leachate	L102B-PL	b
HP102	None Supplied	L	1934553	b	low level PAHs in leachate	L102B-PL	b
HP102 B	None Supplied	L	1935615	b	low level PAHs in leachate	L102B-PL	b
HP103	None Supplied	L	1934554	b	low level PAHs in leachate	L102B-PL	b
HP103 B	None Supplied	L	1935616	b	low level PAHs in leachate	L102B-PL	b
HP104	None Supplied	L	1934555	b	low level PAHs in leachate	L102B-PL	b
HP104 B	None Supplied	L	1935617	b	low level PAHs in leachate	L102B-PL	b
HP105	None Supplied	L	1934556	b	low level PAHs in leachate	L102B-PL	b
HP105 B	None Supplied	L	1935618	b	low level PAHs in leachate	L102B-PL	b
HP106	None Supplied	L	1934557	b	low level PAHs in leachate	L102B-PL	b
HP106 B	None Supplied	L	1935619	b	low level PAHs in leachate	L102B-PL	b
HP107	None Supplied	L	1934558	b	low level PAHs in leachate	L102B-PL	b
HP107 B	None Supplied	L	1935620	b	low level PAHs in leachate	L102B-PL	b
HP108	None Supplied	L	1934559	b	low level PAHs in leachate	L102B-PL	b
HP108 B	None Supplied	L	1935621	b	low level PAHs in leachate	L102B-PL	b
HP109	None Supplied	L	1934560	b	low level PAHs in leachate	L102B-PL	b
HP109 B	None Supplied	L	1935622	b	low level PAHs in leachate	L102B-PL	b
HP110	None Supplied	L	1934561	b	low level PAHs in leachate	L102B-PL	b
HP110 B	None Supplied	L	1935623	b	low level PAHs in leachate	L102B-PL	b
SW101	None Supplied	W	1934564	c	Ammoniacal Nitrogen as N in water	L082-PL	c
SW101	None Supplied	W	1934564	c	pH at 20oC in water (automated)	L099-PL	c

Appendix

Appendix D – Screened Chemical Data

Royal HaskoningDHV

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Ballast leachate		
Land Use:	EQS	**Completed By:**	PP
Receptor:	Controlled waters	**Checked By:**	CM

Assessment Criteria Key

a) WFD inland surface waters 2015
b) EQS Freshwater (older EQS values)
c) M-BAT Tool

Contaminant	Units	Method Detection Limit	Assess-ment Criteria (AC)	Source (see key)	Summary Statistics							Sample Identifiers and Analytical Data										
					Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	HP Dup Ballast	HP101 B	HP102 B	HP103 B	HP104 B	HP105 B	HP106 B	HP107 B	HP108 B	HP109 B	HP110 B
												None Supplied	0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20	0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
												08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
pH	pH Units	N/A	6 to 9	a	11	11	7.2	8.1	7.6	0.26832816	0	7.5	7.3	7.7	7.4	7.4	7.2	7.6	7.8	7.8	7.8	8.1
Sulphate as SO4	mg/l	0.1	-		11	11	0.8	1.8	1.17272727	0.31013194	-	0.9	1.1	1.1	1.6	0.9	1.8	0.8	1	1.2	1.4	1.1
Ammoniacal Nitrogen as N	µg/l	15	200	a	11	11	19	50	37.0909091	9.72064345	0	26	35	33	42	29	48	19	38	50	43	45
Alkalinity as CaCO3	mg/l	3	-		11	7	3	8	5.05454545	1.96792461	-	6.5	< 3.0	6.5	< 3.0	8	7.4	3.9	6.5	< 3.0	< 3.0	4.8
			-																			
Phenol	µg/l	0.05	7.7	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dichlorophenol	µg/l	0.05	0.3	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	50	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	40	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
			-																			
Total Phenols (GC-MS)	µg/l	0.5	-		11	0	0.5	0.5	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
			-																			
Arsenic (dissolved)	µg/l	1	50	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Barium (dissolved)	µg/l	0.05	-		11	11	8.8	32	17.3272727	8.21524083	-	11	16	11	32	9.8	17	8.8	17	14	32	22
Beryllium (dissolved)	µg/l	0.2	-		11	6	0.2	0.5	0.3	0.12649111	-	0.5	0.4	0.4	0.5	0.3	0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Boron (dissolved)	µg/l	10	2000	a	11	0	10	10	-	-	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Cadmium (dissolved)	µg/l	0.08	0.08	a	11	0	0.08	0.08	-	-	0	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	3.4	a	11	0	5	5	-	-	11	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	4.7	a	11	1	1	1.1	1.00909091	-	0	< 1.0	< 1.0	< 1.0	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.4	-		11	10	0.4	1.1	0.68181818	0.26006992	-	0.4	0.5	0.6	1.1	0.4	0.9	< 0.4	0.5	0.9	0.9	0.9
Copper (dissolved)	µg/l	0.7	17.1	c	11	11	1.6	7.5	4.33636364	1.85702597	0	1.6	7.2	3.7	5.9	3.2	4.2	2.6	3.2	3.9	4.7	7.5
Lead (dissolved)	µg/l	1	4.99	c	11	11	1.4	30	11.7090909	9.33589359	7	4.7	9.8	1.4	23	3.1	30	1.9	13	15	19	7.9
Mercury (dissolved)	µg/l	0.5	0.07	b	11	0	0.5	0.5	-	-	11	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	9.58	c	11	11	1.8	3.5	2.68181818	0.51926522	0	2.4	3.5	2.5	3.4	2.5	2.4	2.4	1.8	2.5	3.3	2.8
Selenium (dissolved)	µg/l	4	-		11	0	4	4	-	-	-	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	20	a	11	0	1.7	1.7	-	-	0	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Zinc (dissolved)	µg/l	0.4	24.66	c	11	11	4.5	14	9.84545455	3.2212928	0	5.7	13	4.5	13	7.2	7.3	12	11	14	11	9.6
			-																			
Benzene	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	74	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	20	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	30	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	30	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	-		11	0	10	10	-	-	-	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
			-																			
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	10	a	11	0	10	10	-	-	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	10	a	11	0	10	10	-	-	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	10	a	11	0	10	10	-	-	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	10	a	11	0	10	10	-	-	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	-		11	0	10	10	-	-	-	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
			-																			
TPH-CWG - Aromatic >C5 - C7	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	10	a	11	0	10	10	-	-	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	10	a	11	0	10	10	-	-	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	10	a	11	0	10	10	-	-	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	10	a	11	0	10	10	-	-	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	-		11	0	10	10	-	-	-	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
			-																			
Chloromethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	2.5	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Ballast leachate		
Land Use:	EQS	**Completed By:**	PP
Receptor:	Controlled waters	**Checked By:**	CM

Assessment Criteria Key

a) WFD inland surface waters 2015
b) EQS Freshwater (older EQS values)
c) M-BAT Tool

Contaminant	Units	Method Detection Limit	Assess-ment Criteria (AC)	Source (see key)	Summary Statistics							Sample Identifiers and Analytical Data									
					Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	HP Dup Ballast	HP101 B	HP102 B	HP103 B	HP104 B	HP105 B	HP106 B	HP107 B	HP108 B	HP109 B	HP110 B
												None Supplied	0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20	0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
												08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
1,1,1-Trichloroethane	µg/l	1	100	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloroethane	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	12	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloropropane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	7.4	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	400	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	20	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	30	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	50	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	30	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ter-Butylbenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-dichlorobenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
P-Isopropyltoluene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichlorobenzene	µg/l	1	20	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-dichlorobenzene	µg/l	1	20	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	0.1	0.6	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,3-Trichlorobenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
			-																			
Aniline	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/l	0.05	7.7	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	50	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	20	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	20	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	2	a	11	0	0.01	0.01	-	-	0	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	0.3	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	0.6	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	40	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Ballast leachate		
Land Use:	EQS	**Completed By:**	PP
Receptor:	Controlled waters	**Checked By:**	CM

Assessment Criteria Key

a) WFD inland surface waters 2015
b) EQS Freshwater (older EQS values)
c) M-BAT Tool

Contaminant	Units	Method Detection Limit	Assess-ment Criteria (AC)	Source (see key)	Summary Statistics							Sample Identifiers and Analytical Data										
					Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	HP Dup Ballast	HP101 B	HP102 B	HP103 B	HP104 B	HP105 B	HP106 B	HP107 B	HP108 B	HP109 B	HP110 B
												None Supplied	0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20	0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10
												08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
2-Chloronaphthalene	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	800	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,6-Dinitrotoluene	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	-		11	2	0.01	0.5	0.05909091	0.14700031	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.5	0.06
Acenaphthene	µg/l	0.01	-		11	11	0.02	0.3	0.06090909	0.08104993	-	0.04	0.04	0.02	0.06	0.02	0.06	0.03	0.02	0.02	0.3	0.06
2,4-Dinitrotoluene	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	200	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/l	0.01	-		11	11	0.02	0.1	0.03454545	0.02252272	-	0.03	0.03	0.02	0.03	0.02	0.04	0.03	0.02	0.03	0.1	0.03
Azobenzene	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.02	0.05	a	11	0	0.02	0.02	-	-	0	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Phenanthrene	µg/l	0.01	-		11	0	0.01	0.01	-	-	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Anthracene	µg/l	0.01	0.1	a	11	0	0.01	0.01	-	-	0	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Carbazole	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	0.0063	a	11	11	0.01	0.1	0.04181818	0.02713602	11	0.02	0.04	0.01	0.06	0.02	0.06	0.02	0.05	0.02	0.1	0.06
Pyrene	µg/l	0.01	-		11	11	0.02	0.1	0.04545455	0.02696799	-	0.02	0.04	0.02	0.07	0.02	0.07	0.02	0.05	0.03	0.1	0.06
Butyl benzyl phthalate	µg/l	0.05	7.5	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	-		11	4	0.01	0.1	0.03181818	0.03572623	-	< 0.01	< 0.01	< 0.01	0.04	< 0.01	0.04	< 0.01	< 0.01	< 0.01	0.1	0.1
Chrysene	µg/l	0.01	-		11	4	0.01	0.07	0.02090909	0.020226	-	< 0.01	< 0.01	< 0.01	0.02	< 0.01	0.02	< 0.01	< 0.01	< 0.01	0.07	0.05
Benzo(b)fluoranthene	µg/l	0.01	-		11	2	0.01	0.1	0.02363636	0.03107176	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.1	0.07
Benzo(k)fluoranthene	µg/l	0.01	-		11	2	0.01	0.06	0.01727273	0.01678744	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.06	0.04
Benzo(a)pyrene	µg/l	0.01	0.00017	a	11	2	0.01	0.09	0.02272727	0.02866737	11	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.09	0.07
Indeno(1,2,3-cd)pyrene	µg/l	0.01	-		11	2	0.01	0.04	0.01545455	0.0121356	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.04	0.04
Dibenz(a,h)anthracene	µg/l	0.01	-		11	0	0.01	0.01	-	-	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	-		11	2	0.01	0.08	0.02	0.0232379	-	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.08	0.05
			-																			
Fluoranthene (low level)	µg/l	0.002	0.0063	a	11	11	0.01	0.1	0.04181818	0.02713602	11	0.02	0.04	0.01	0.06	0.02	0.06	0.02	0.05	0.02	0.1	0.06
Benzo(b)fluoranthene (low level)	µg/l	0.002	-		11	2	0.002	0.1	0.01709091	0.03423873	-	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.1	0.07
Benzo(k)fluoranthene (low level)	µg/l	0.002	-		11	2	0.002	0.06	0.01072727	0.01992532	-	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.06	0.04
Benzo(a)pyrene (low level)	µg/l	0.002	0.00017	a	11	2	0.002	0.09	0.01618182	0.03186791	11	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.09	0.07
Indeno(1,2,3-cd)pyrene (low level)	µg/l	0.002	-		11	2	0.002	0.04	0.00890909	0.01537176	-	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.04	0.04
Benzo(ghi)perylene (low level)	µg/l	0.002	-		11	2	0.002	0.08	0.01345455	0.02635285	-	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.08	0.05
Naphthalene (low level)	µg/l	0.002	2	a	11	0	0.002	0.002	-	-	0	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acenaphthylene (low level)	µg/l	0.002	-		11	2	0.002	0.06	0.01163636	0.02155585	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.05	0.06
Acenaphthene (low level)	µg/l	0.002	-		11	11	0.02	0.3	0.06090909	0.08104993	-	0.04	0.04	0.02	0.06	0.02	0.06	0.03	0.02	0.02	0.3	0.06
Fluorene (low level)	µg/l	0.002	-		11	11	0.02	0.1	0.03454545	0.02252272	-	0.03	0.03	0.02	0.03	0.02	0.04	0.03	0.02	0.03	0.1	0.03
Phenanthrene (low level)	µg/l	0.002	-		11	0	0.002	0.002	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Antracene (low level)	µg/l	0.002	0.1	a	11	0	0.002	0.002	-	-	0	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Pyrene (low level)	µg/l	0.002	-		11	11	0.02	0.2	0.06181818	0.05250108	-	0.02	0.04	0.02	0.07	0.2	0.07	0.02	0.05	0.03	0.1	0.06
Benzo(a)anthracene (low level)	µg/l	0.002	-		11	4	0.002	0.1	0.02672727	0.03920482	-	< 0.0020	< 0.0020	< 0.0020	0.04	< 0.0020	0.04	< 0.0020	< 0.0020	< 0.0020	0.1	0.1
Chrysene (low level)	µg/l	0.002	-		11	4	0.002	0.07	0.01581818	0.02340008	-	< 0.0020	< 0.0020	< 0.0020	0.02	< 0.0020	0.02	< 0.0020	< 0.0020	< 0.0020	0.07	0.05
Di-bezno(a,h)anthracene (low level)	µg/l	0.002	-		11	0	0.002	0.002	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
			-																			
Sum of benzo(b)fluoranthene, benzo(k)fluoranthene, bezon(g,h,i)perylene and indeno(1,2,3-cd)pyrene	ug/l		-		2	2	0.2	0.28	0.24	0.05656854	-	-	-	-	-	-	-	-	-	-	0.28	0.2

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Soil Data		
Land Use:	Drinking water pipe assessment	**Completed By:**	KD
Receptor:	Human health	**Checked By:**	PP

Assessment Criteria Key
a) UK WIR PVC Pipe Material
b) UK WIR PE Pipe Material

Contaminant	Units	Method Detection Limit	Assess-ment Criteria (AC)	Source (see key)	Summary Statistics: Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	HP101 0.00-0.25 08/07/2021	HP102 0.00-0.30 08/07/2021	HP103 0.00-0.15 08/07/2021	HP104 0.00-0.30 08/07/2021	HP105 0.00-0.20 08/07/2021	HP106 0.00-0.30 08/07/2021	HP107 0.00-0.30 08/07/2021	HP108 0.00-0.30 08/07/2021	HP109 0.00-0.15 08/07/2021	HP110 0.00-0.10 08/07/2021	HP Dup 1 one Supplie 08/07/2021
Asbestos in Soil	Type	N/A	-		0	0	#VALUE!	#VALUE!	-	-	-	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
			-																			
pH - Automated	pH Units	N/A	-		11	11	7.7	8	7.86363636	0.11200649	-	7.7	8	7.8	8	7.9	7.9	7.8	7.7	8	7.8	7.9
Ammoniacal Nitrogen as N	mg/kg	0.5	-		11	4	0.5	2.3	0.81818182	0.57239529	-	< 0.5	< 0.5	0.8	< 0.5	1	2.3	< 0.5	< 0.5	1.4	< 0.5	< 0.5
Total Organic Carbon (TOC)	%	0.1	-		11	11	4.8	8.1	6.46363636	1.13514116	-	6.3	6	8.1	4.8	4.8	6.3	5.8	8.1	6.4	7.4	7.1
			-																			
Total Phenols (monohydric)	mg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
			-																			
Naphthalene	mg/kg	0.05	-		11	11	0.58	18	4.22636364	5.55266472	-	2.7	1.8	2.4	2.3	1.4	1.1	3.3	0.91	0.58	18	12
Acenaphthylene	mg/kg	0.05	1.4	a	11	9	0.05	28	5.07818182	10.1652445	2	0.61	< 0.05	1.3	0.27	0.59	0.69	0.95	0.35	< 0.05	28	23
Acenaphthene	mg/kg	0.05	1.4	a	11	11	1.4	85	17.9272727	30.4506844	10	7.4	1.6	6.2	3.6	2.9	3.1	11	1.4	2	85	73
Fluorene	mg/kg	0.05	1.4	a	11	11	0.97	50	10.7245455	18.0696604	8	5.2	1	3.7	2	1.7	1.9	6.3	0.97	1.2	50	44
Phenanthrene	mg/kg	0.05	1.4	a	11	11	11	540	114.818182	189.97885	11	49	13	54	20	24	22	68	12	11	540	450
Anthracene	mg/kg	0.05	1.4	a	11	11	2.4	130	27.3454545	44.1609865	11	13	3.3	16	4.2	6.5	5.1	17	3.3	2.4	130	100
Fluoranthene	mg/kg	0.05	1.4	a	11	11	17	760	183.363636	265.891058	11	81	24	170	29	65	43	140	28	17	760	660
Pyrene	mg/kg	0.05	1.4	a	11	11	16	710	171.909091	244.8385	11	78	23	170	26	67	42	130	29	16	710	600
Benzo(a)anthracene	mg/kg	0.05	1.4	a	11	11	6.7	320	87.4272727	116.218364	11	41	14	97	14	39	22	83	15	6.7	320	310
Chrysene	mg/kg	0.05	1.4	a	11	11	6.3	270	71.6636364	90.2270721	11	39	12	94	14	33	22	64	14	6.3	270	220
Benzo(b)fluoranthene	mg/kg	0.05	1.4	a	11	11	7.3	310	92.2090909	113.974826	11	44	14	130	16	46	24	94	19	7.3	310	310
Benzo(k)fluoranthene	mg/kg	0.05	1.4	a	11	11	2.9	150	39.1545455	50.5491912	11	16	5.3	97	5.9	16	11	23	7.6	2.9	150	96
Benzo(a)pyrene	mg/kg	0.05	1.4	a	11	11	6.4	320	79.9454545	111.13412	11	37	12	62	13	39	22	72	16	6.4	320	280
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	1.4	a	11	11	2.8	150	37.8636364	52.0378376	11	14	5.8	42	5.9	17	9.8	31	8.2	2.8	150	130
Dibenz(a,h)anthracene	mg/kg	0.05	1.4	a	11	11	0.74	32	9.00363636	10.9829753	9	4.4	1.4	12	1.8	4.3	2.7	9.5	2.2	0.74	32	28
Benzo(ghi)perylene	mg/kg	0.05	1.4	a	11	11	3.3	180	44.8636364	63.36591	11	17	6.5	46	6.4	19	11	35	9.3	3.3	180	160
			-																			
Speciated Total EPA-16 PAHs	mg/kg	0.8	-		11	11	86.1	4040	994.190909	1404.21679	-	448	140	996	164	382	243	781	166	86.1	4040	3490
			-																			
Arsenic (aqua regia extractable)	mg/kg	1	-		11	11	16	83	59.5454545	17.935237	-	62	69	51	66	44	76	66	83	16	60	62
Barium (aqua regia extractable)	mg/kg	1	-		11	11	56	610	313.272727	135.313777	-	310	230	610	220	330	330	410	310	56	360	280
Beryllium (aqua regia extractable)	mg/kg	0.06	-		11	11	1.2	1.9	1.55454545	0.26215887	-	1.7	1.9	1.5	1.3	1.2	1.8	1.9	1.4	1.2	1.7	1.5
Boron (water soluble)	mg/kg	0.2	-		11	11	0.3	1.3	0.79090909	0.28090762	-	1.1	0.7	0.7	0.5	0.6	1	0.3	0.9	1.3	0.8	0.8
Cadmium (aqua regia extractable)	mg/kg	0.2	-		11	7	0.2	3.4	1.76363636	1.31626192	-	2.4	3.1	2.6	2.7	1.6	3.4	2.8	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	-		11	0	1.2	1.2	-	-	-	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	-		11	11	44	81	60.5454545	9.5850262	-	58	69	63	60	57	63	64	81	44	56	51
Chromium (aqua regia extractable)	mg/kg	1	-		11	11	45	82	60.9090909	9.65872192	-	58	69	63	61	57	64	64	82	45	56	51
Copper (aqua regia extractable)	mg/kg	1	-		11	11	38	340	268.909091	88.0970539	-	330	310	230	250	210	320	290	340	38	330	310
Lead (aqua regia extractable)	mg/kg	1	-		11	11	59	4400	1357.18182	1144.33446	-	1200	550	4400	520	1400	1100	2100	1200	59	1400	1000
Mercury (aqua regia extractable)	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	-		11	11	39	150	71.4545455	28.1828446	-	67	80	150	61	55	70	70	73	39	60	61
Selenium (aqua regia extractable)	mg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	-		11	11	65	85	71.8181818	6.46247912	-	67	70	65	68	67	85	82	76	69	71	70
Zinc (aqua regia extractable)	mg/kg	1	-		11	11	110	990	484.545455	250.813223	-	680	290	500	320	320	390	480	460	110	990	790
			-																			
Benzene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	30	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
			-																			
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	1.4	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	1.4	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	1.4	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	10	b	11	2	1	10	2.62727273	3.62052231	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.9	10
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	10	b	11	6	2	27	10.1090909	9.32581949	5	18	< 2.0	12	< 2.0	7.2	< 2.0	14	< 2.0	< 2.0	27	23
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	10	b	11	8	8	110	35.9090909	33.6108749	8	35	< 8.0	21	< 8.0	28	16	59	21	< 8.0	81	110
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	500	b	11	10	8	730	295.454545	192.873204	1	180	320	92	210	340	270	290	330	< 8.0	480	730
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	-		11	10	10	870	340	231.257432	-	230	320	130	210	370	290	360	350	< 10	600	870
			-																			
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	1.4	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	1.4	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	1.4	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	10	b	11	9	1	46	10.2181818	13.3394766	3	4.4	5.6	11	6.9	4.6	3.8	5.1	< 1.0	< 1.0	46	23
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	10	b	11	11	8.3	230	57.3	72.2832622	10	30	27	42	24	26	19	31	8.3	23	230	170
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	10	b	11	11	52	1300	365.818182	452.484877	11	210	73	410	81	170	110	340	78	52	1200	1300
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	500	b	11	11	86	1300	509.636364	384.964225	4	380	200	790	200	430	270	680	270	86	1000	1300
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	-		11	11	160	2700	945.454545	889.295942	-	630	310	1300	310	630	400	1100	360	160	2500	2700
			-																			
Chloromethane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Soil Data		
Land Use:	Drinking water pipe assessment	**Completed By:**	KD
Receptor:	Human health	**Checked By:**	PP

Assessment Criteria Key
a) UK WIR PVC Pipe Material
b) UK WIR PE Pipe Material

Contaminant	Units	Method Detection Limit	Assess-ment Criteria (AC)	Source (see key)	Summary Statistics							Sample Identifiers and Analytical Data										
					Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	HP101	HP102	HP103	HP104	HP105	HP106	HP107	HP108	HP109	HP110	HP Dup 1
												0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20	0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10	one Supplie
												08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Vinyl Chloride	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	30	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/kg	1	1400	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/kg	1	1400	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/kg	1	1400	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/kg	1	1400	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	125	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
			-																			
Aniline	mg/kg	0.1	-		11	0	0.1	0.1	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	0.4	a	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	1.4	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	1.4	a	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	1.4	a	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	1.4	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	1.4	a	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	1.4	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	1.4	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	1.4	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	1.4	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	1.4	a	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	1.4	a	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	1.4	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	1.4	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	1.4	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Soil Data		
Land Use:	Drinking water pipe assessment	**Completed By:**	KD
Receptor:	Human health	**Checked By:**	PP

Assessment Criteria Key
a) UK WIR PVC Pipe Material
b) UK WIR PE Pipe Material

Contaminant	Units	Method Detection Limit	Assess-ment Criteria (AC)	Source (see key)	Summary Statistics							Sample Identifiers and Analytical Data										
					Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	HP101	HP102	HP103	HP104	HP105	HP106	HP107	HP108	HP109	HP110	HP Dup 1
												0.00-0.25	0.00-0.30	0.00-0.15	0.00-0.30	0.00-0.20	0.00-0.30	0.00-0.30	0.00-0.30	0.00-0.15	0.00-0.10	one Supplie
												08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Naphthalene	mg/kg	0.05	-		11	11	0.58	18	4.22636364	5.55266472	-	2.7	1.8	2.4	2.3	1.4	1.1	3.3	0.91	0.58	18	12
2,4-Dichlorophenol	mg/kg	0.3	1.4	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	1.4	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	1.4	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	1.4	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	1.4	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	1.4	a	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	1.4	a	11	2	0.1	29	4.9	10.7376906	2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	29	24
2-Chloronaphthalene	mg/kg	0.1	1.4	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	1.4	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	1.4	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.05	1.4	a	11	8	0.05	23	2.53727273	6.79835582	1	0.61	< 0.05	1.3	0.27	0.59	0.69	0.95	0.35	< 0.05	< 0.05	23
Acenaphthene	mg/kg	0.05	-		11	11	1.4	85	17.9272727	30.4506844	-	7.4	1.6	6.2	3.6	2.9	3.1	11	1.4	2	85	73
2,4-Dinitrotoluene	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dibenzofuran	mg/kg	0.2	1.4	a	11	2	0.2	25	4.43636364	9.44915581	2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	25	22
4-Chlorophenyl phenyl ether	mg/kg	0.3	1.4	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	1.4	a	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Nitroaniline	mg/kg	0.2	1.4	a	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Fluorene	mg/kg	0.05	-		11	11	0.97	50	10.7245455	18.0696604	-	5.2	1	3.7	2	1.7	1.9	6.3	0.97	1.2	50	44
Azobenzene	mg/kg	0.3	1.4	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	1.4	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene	mg/kg	0.05	1.4	a	11	11	11	540	114.818182	189.97885	11	49	13	54	20	24	22	68	12	11	540	450
Anthracene	mg/kg	0.05	1.4	a	11	11	2.4	130	27.3454545	44.1609865	11	13	3.3	16	4.2	6.5	5.1	17	3.3	2.4	130	100
Carbazole	mg/kg	0.3	1.4	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Dibutyl phthalate	mg/kg	0.2	1.4	a	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Fluoranthene	mg/kg	0.05	1.4	a	11	11	17	760	183.363636	265.891058	11	81	24	170	29	65	43	140	28	17	760	660
Pyrene	mg/kg	0.05	1.4	a	11	11	16	710	171.909091	244.8385	11	78	23	170	26	67	42	130	29	16	710	600
Butyl benzyl phthalate	mg/kg	0.3	1.4	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Benzo(a)anthracene	mg/kg	0.05	1.4	a	11	11	6.7	320	87.4272727	116.218364	11	41	14	97	14	39	22	83	15	6.7	320	310
Chrysene	mg/kg	0.05	1.4	a	11	11	6.3	270	71.6636364	90.2270721	11	39	12	94	14	33	22	64	14	6.3	270	220
Benzo(b)fluoranthene	mg/kg	0.05	1.4	a	11	11	7.3	310	92.2090909	113.974826	11	44	14	130	16	46	24	94	19	7.3	310	310
Benzo(k)fluoranthene	mg/kg	0.05	1.4	a	11	11	2.9	150	39.1545455	50.5491912	11	16	5.3	97	5.9	16	11	23	7.6	2.9	150	96
Benzo(a)pyrene	mg/kg	0.05	1.4	a	11	11	6.4	320	79.9454545	111.13412	11	37	12	62	13	39	22	72	16	6.4	320	280
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	1.4	a	11	11	2.8	150	37.8636364	52.0378376	11	14	5.8	42	5.9	17	9.8	31	8.2	2.8	150	130
Dibenz(a,h)anthracene	mg/kg	0.05	1.4	a	11	11	0.74	32	9.00363636	10.9829753	9	4.4	1.4	12	1.8	4.3	2.7	9.5	2.2	0.74	32	28
Benzo(ghi)perylene	mg/kg	0.05	1.4	a	11	11	3.3	180	44.8636364	63.36591	11	17	6.5	46	6.4	19	11	35	9.3	3.3	180	160
			-																			

Data Summary Statistics

Site:	Castlefield Viaduct NT	**Project No:**	PC2387
Data Description:	Paint	**SOM (%):**	
Land Use:		**Completed By:**	KD
Receptor:	Human Health	**Checked By:**	PP

Assessment Criteria Key
a) SoBRA aGAC

Contaminant	Units	Method Detection Limit	Assess-ment Criteria (AC)	Source (see key)	Summary Statistics							Sample Identifiers and Analytical Data									
					Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	PS101	PS102	PS103	PS104	PS105	PS106	PS107	PS108	PS109	PS110
												08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021	08/07/2021
Cadmium (aqua regia extractable in "other")	mg/kg	0.2	12000	a	10	9	0.2	10	4.18	2.74055955	0	6.6	4.1	< 0.2	4.5	10	2.1	3	2.6	5.7	3
Chromium (aqua regia extractable in "other")	mg/kg	1	-		10	10	110	310	206	69.7933458	-	190	130	120	290	310	110	220	200	250	240
Lead (aqua regia extractable in "other")	mg/kg	1	-		10	10	55000	66000	59800	3224.9031	-	62000	55000	57000	57000	61000	59000	61000	62000	58000	66000
Nickel (aqua regia extractable in "other")	mg/kg	1	-		10	10	12	30	19.2	5.71158666	-	30	22	13	25	15	12	18	22	15	20
Zinc (aqua regia extractable in "other")	mg/kg	1	-		10	10	1200	6500	3560	2061.39112	-	4800	5400	1200	5800	4600	1200	2200	2400	6500	1500

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Soil leachate EQS		
Land Use:	EQS	**Completed By:**	KD
Receptor:	Controlled Waters	**Checked By:**	PP

Assessment Criteria Key

a) WFD inland surface waters 2015
b) EQS Freshwater (older EQS values)
c) M-BAT Tool

Contaminant	Units	Method Detection Limit	Assessment Criteria (AC)	Source (see key)	Summary Statistics: Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	Sample Identifiers and Analytical Data: HP101 0.00-0.25 08/07/2021	HP102 0.00-0.30 08/07/2021	HP103 0.00-0.15 08/07/2021	HP104 0.00-0.30 08/07/2021	HP105 0.00-0.20 08/07/2021	HP106 0.00-0.30 08/07/2021	HP107 0.00-0.30 08/07/2021	HP108 0.00-0.30 08/07/2021	HP109 0.00-0.15 08/07/2021	HP110 0.00-0.10 08/07/2021	HP Dup 1 lone Supplie 08/07/2021
pH	pH Units	N/A	6 to 9	a	11	11	7.7	8.1	7.95454545	0.11281521	0	7.7	7.9	8	8	7.9	8.1	8.1	7.9	7.9	8	8
Sulphate as SO4	mg/l	0.1	-		11	11	2.4	7.7	4.03636364	1.91011661	-	4.2	3	3.5	3	4.5	2.5	2.4	2.5	3.5	7.6	7.7
Ammoniacal Nitrogen as N	µg/l	15	200	a	11	4	15	42	21.0909091	10.4062918	0	34	35	< 15	< 15	< 15	< 15	< 15	42	< 15	16	< 15
Alkalinity as CaCO3	mg/l	3	-		11	11	56	110	79.5454545	17.0021389	-	86	56	69	110	77	81	66	77	110	72	71
			-																			
Phenol	µg/l	0.05	7.7	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dichlorophenol	µg/l	0.05	0.3	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	50	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	40	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
			-																			
Total Phenols (GC-MS)	µg/l	0.5	-		11	0	0.5	0.5	-	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
			-																			
Arsenic (dissolved)	µg/l	1	50	a	11	4	1	5.5	2.26363636	1.88481974	0	2.8	< 1.0	4.2	< 1.0	< 1.0	< 1.0	< 1.0	5.4	5.5	< 1.0	< 1.0
Barium (dissolved)	µg/l	0.05	-		11	11	45	180	104.272727	35.7101972	-	92	45	130	95	140	93	110	73	180	95	94
Beryllium (dissolved)	µg/l	0.2	-		11	5	0.2	0.4	0.27272727	0.0904534	-	< 0.2	< 0.2	0.4	< 0.2	0.4	0.4	0.3	< 0.2	< 0.2	< 0.2	0.3
Boron (dissolved)	µg/l	10	-		11	11	16	28	19.1818182	3.68288425	-	28	16	18	23	17	18	16	21	20	18	16
Cadmium (dissolved)	µg/l	0.08	0.08	a	11	0	0.08	0.08	-	-	0	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Chromium (hexavalent)	µg/l	5	3.4	a	11	0	5	5	-	-	11	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium (III)	µg/l	1	4.7	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chromium (dissolved)	µg/l	0.4	-		11	8	0.4	0.6	0.48181818	0.08738629	-	0.4	< 0.4	< 0.4	0.6	0.4	0.5	0.5	0.6	< 0.4	0.5	0.6
Copper (dissolved)	µg/l	0.7	17.1	c	11	11	5.2	24	11.5636364	6.15764122	2	24	20	6.8	8.2	6.7	5.2	11	17	7.2	9.1	12
Lead (dissolved)	µg/l	1	4.99	c	11	11	2.1	9.6	5.23636364	2.35723258	7	5.6	2.3	5.2	2.1	9.6	2.6	7.7	7	4.1	5.9	5.5
Mercury (dissolved)	µg/l	0.5	0.07	b	11	0	0.5	0.5	-	-	11	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel (dissolved)	µg/l	0.3	9.58	c	11	11	1.6	3.7	2.51818182	0.55103209	0	3.7	1.6	2.7	2.6	2.6	1.8	2.7	2.4	2.6	2.2	2.8
Selenium (dissolved)	µg/l	4	-		11	0	4	4	-	-	-	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0
Vanadium (dissolved)	µg/l	1.7	20	a	11	0	1.7	1.7	-	-	0	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7	< 1.7
Zinc (dissolved)	µg/l	0.4	24.66	c	11	11	3.4	28	7.14545455	7.13195115	1	28	6	3.8	4.3	3.4	3.4	3.8	8.5	3.7	6.8	6.9
			-																			
Benzene	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	74	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	20	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	30	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	30	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	10	-		11	0	10	10	-	-	-	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
			-																			
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	10	a	11	0	10	10	-	-	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	10	a	11	0	10	10	-	-	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	10	a	11	0	10	10	-	-	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	10	a	11	0	10	10	-	-	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	-		11	0	10	10	-	-	-	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
			-																			
TPH-CWG - Aromatic >C5 - C7	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C7 - C8	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C8 - C10	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
TPH-CWG - Aromatic >C10 - C12	µg/l	10	10	a	11	0	10	10	-	-	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C12 - C16	µg/l	10	10	a	11	0	10	10	-	-	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C16 - C21	µg/l	10	10	a	11	0	10	10	-	-	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic >C21 - C35	µg/l	10	10	a	11	0	10	10	-	-	0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	-		11	0	10	10	-	-	-	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
			-																			
Chloromethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-dichloroethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/l	1	2.5	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/l	1	100	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Soil leachate EQS		
Land Use:	EQS	**Completed By:**	KD
Receptor:	Controlled Waters	**Checked By:**	PP

Assessment Criteria Key

a) WFD inland surface waters 2015
b) EQS Freshwater (older EQS values)
c) M-BAT Tool

Contaminant	Units	Method Detection Limit	Assessment Criteria (AC)	Source (see key)	Summary Statistics: Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	Sample Identifiers and Analytical Data: HP101 0.00-0.25 08/07/2021	HP102 0.00-0.30 08/07/2021	HP103 0.00-0.15 08/07/2021	HP104 0.00-0.30 08/07/2021	HP105 0.00-0.20 08/07/2021	HP106 0.00-0.30 08/07/2021	HP107 0.00-0.30 08/07/2021	HP108 0.00-0.30 08/07/2021	HP109 0.00-0.15 08/07/2021	HP110 0.00-0.10 08/07/2021	HP Dup 1 lone Supplie 08/07/2021
1,2-dichloroethane	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/l	1	12	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichloropropane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/l	1	74	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/l	1	400	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/l	1	10	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/l	1	20	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/l	1	30	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/l	1	50	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
ter-Butylbenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-dichlorobenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
P-Isopropyltoluene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-dichlorobenzene	µg/l	1	20	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-dichlorobenzene	µg/l	1	20	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/l	0.1	0.6	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,2,3-Trichlorobenzene	µg/l	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
			-																			
Aniline	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenol	µg/l	0.05	7.7	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chlorophenol	µg/l	0.05	50	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethyl)ether	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/l	0.05	20	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/l	0.05	20	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroisopropyl)ether	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylphenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachloroethane	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Methylphenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Isophorone	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Nitrophenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4-Dimethylphenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bis(2-chloroethoxy)methane	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2,4-Trichlorobenzene	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	µg/l	0.01	2	a	11	0	0.01	0.01	-	-	0	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
2,4-Dichlorophenol	µg/l	0.05	0.3	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloroaniline	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobutadiene	µg/l	0.05	0.6	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chloro-3-methylphenol	µg/l	0.05	40	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,6-Trichlorophenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2,4,5-Trichlorophenol	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Chloronaphthalene	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dimethylphthalate	µg/l	0.05	800	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Soil leachate EQS		
Land Use:	EQS	**Completed By:**	KD
Receptor:	Controlled Waters	**Checked By:**	PP

Assessment Criteria Key

a) WFD inland surface waters 2015
b) EQS Freshwater (older EQS values)
c) M-BAT Tool

Contaminant	Units	Method Detection Limit	Assessment Criteria (AC)	Source (see key)	Summary Statistics: Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	Sample Identifiers and Analytical Data: HP101 0.00-0.25 08/07/2021	HP102 0.00-0.30 08/07/2021	HP103 0.00-0.15 08/07/2021	HP104 0.00-0.30 08/07/2021	HP105 0.00-0.20 08/07/2021	HP106 0.00-0.30 08/07/2021	HP107 0.00-0.30 08/07/2021	HP108 0.00-0.30 08/07/2021	HP109 0.00-0.15 08/07/2021	HP110 0.00-0.10 08/07/2021	HP Dup 1 lone Supplie 08/07/2021
2,6-Dinitrotoluene	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	µg/l	0.01	-		11	0	0.01	0.02	-	-	-	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	µg/l	0.01	-		11	0	0.03	0.24	-	-	-	0.07	0.07	0.10	0.05	0.12	0.07	0.08	0.05	0.24	0.04	0.03
2,4-Dinitrotoluene	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzofuran	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Chlorophenyl phenyl ether	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Diethyl phthalate	µg/l	0.05	200	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
4-Nitroaniline	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	µg/l	0.01	-		11	0	0.02	0.1	-	-	-	0.08	0.07	0.07	0.05	0.06	0.05	0.06	0.05	0.10	0.03	0.02
Azobenzene	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromophenyl phenyl ether	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	µg/l	0.02	0.05	a	11	0	0.02	0.02	-	-	0	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Phenanthrene	µg/l	0.01	-		11	0	0.01	0.46	-	-	-	< 0.01	< 0.01	< 0.01	< 0.01	0.09	< 0.01	< 0.01	< 0.01	0.46	< 0.01	< 0.01
Anthracene	µg/l	0.01	0.1	a	11	0	0.01	0.14	-	-	1	< 0.01	< 0.01	< 0.01	< 0.01	0.06	< 0.01	< 0.01	< 0.01	0.14	< 0.01	< 0.01
Carbazole	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibutyl phthalate	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthraquinone	µg/l	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	µg/l	0.01	0.0063	a	11	0	0.03	1.6	-	-	11	0.16	0.08	0.39	0.03	0.14	0.11	0.62	0.08	1.6	0.21	0.06
Pyrene	µg/l	0.01	-		11	0	0.03	1.8	-	-	-	0.16	0.07	0.40	0.03	0.16	0.12	0.72	0.08	1.8	0.20	0.08
Butyl benzyl phthalate	µg/l	0.05	7.5	a	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	µg/l	0.01	-		11	0	0.01	0.58	-	-	-	0.07	0.04	0.13	< 0.01	0.11	0.05	0.27	< 0.01	0.58	0.09	0.07
Chrysene	µg/l	0.01	-		11	0	0.01	0.6	-	-	-	0.05	0.02	0.12	< 0.01	0.07	0.05	0.30	< 0.01	0.60	0.07	0.07
Benzo(b)fluoranthene	µg/l	0.01	-		11	0	0.01	0.89	-	-	-	0.05	< 0.01	0.12	< 0.01	0.11	0.05	0.34	< 0.01	0.89	0.11	0.09
Benzo(k)fluoranthene	µg/l	0.01	-		11	0	0.01	0.36	-	-	-	0.03	< 0.01	0.05	< 0.01	0.10	0.03	0.18	< 0.01	0.36	0.05	0.07
Benzo(a)pyrene	µg/l	0.01	0.00017	a	11	0	0.01	0.81	-	-	11	0.05	< 0.01	0.10	< 0.01	0.14	0.05	0.32	< 0.01	0.81	0.11	0.09
Indeno(1,2,3-cd)pyrene	µg/l	0.01	-		11	0	0.01	0.42	-	-	-	< 0.01	< 0.01	0.04	< 0.01	0.07	< 0.01	0.14	< 0.01	0.42	0.09	0.05
Dibenz(a,h)anthracene	µg/l	0.01	-		11	0	0.01	0.14	-	-	-	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01	0.05	< 0.01	0.14	< 0.01	< 0.01
Benzo(ghi)perylene	µg/l	0.01	-		11	0	0.01	0.64	-	-	-	< 0.01	< 0.01	0.07	< 0.01	0.10	< 0.01	0.22	< 0.01	0.64	0.13	0.07
			-																			
Fluoranthene (low level)	µg/l	0.002	0.0063	a	11	0	0.03	1.6	-	-	11	0.16	0.080	0.39	0.030	0.14	0.11	0.62	0.080	1.6	0.21	0.060
Benzo(b)fluoranthene (low level)	µg/l	0.002	-		11	0	0.002	0.89	-	-	-	0.050	< 0.002	0.12	< 0.002	0.11	0.050	0.34	< 0.002	0.89	0.11	0.090
Benzo(k)fluoranthene (low level)	µg/l	0.002	-		11	0	0.002	0.36	-	-	-	0.030	< 0.002	0.050	< 0.002	0.10	0.030	0.18	< 0.002	0.36	0.050	0.070
Benzo(a)pyrene (low level)	µg/l	0.002	0.00017	a	11	0	0.002	0.81	-	-	11	0.050	< 0.002	0.10	< 0.002	0.14	0.050	0.32	< 0.002	0.81	0.11	0.090
Indeno(1,2,3-cd)pyrene (low level)	µg/l	0.002	-		11	0	0.002	0.42	-	-	-	< 0.002	< 0.002	0.040	< 0.002	0.070	< 0.002	0.14	< 0.002	0.42	0.090	0.050
Benzo(ghi)perylene (low level)	µg/l	0.002	-		11	0	0.002	0.64	-	-	-	< 0.002	< 0.002	0.070	< 0.002	0.10	< 0.002	0.22	< 0.002	0.64	0.13	0.070
Naphthalene (low level)	µg/l	0.002	2	a	11	0	0.002	0.002	-	-	0	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acenaphthylene (low level)	µg/l	0.002	-		11	0	0.002	0.02	-	-	-	< 0.0020	< 0.0020	0.020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020	< 0.0020
Acenaphthene (low level)	µg/l	0.002	-		11	0	0.03	0.24	-	-	-	0.070	0.070	0.10	0.050	0.12	0.070	0.080	0.050	0.24	0.040	0.030
Fluorene (low level)	µg/l	0.002	-		11	0	0.02	0.1	-	-	-	0.080	0.070	0.070	0.050	0.060	0.050	0.060	0.050	0.10	0.030	0.020
Phenanthrene (low level)	µg/l	0.002	-		11	0	0.002	0.46	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.090	< 0.0020	< 0.0020	< 0.0020	0.46	< 0.0020	< 0.0020
Antracene (low level)	µg/l	0.002	0.1	a	11	0	0.002	0.14	-	-	1	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.060	< 0.0020	< 0.0020	< 0.0020	0.14	< 0.0020	< 0.0020
Pyrene (low level)	µg/l	0.002	-		11	0	0.03	1.8	-	-	-	0.16	0.070	0.40	0.030	0.16	0.12	0.72	0.080	1.8	0.20	0.080
Benzo(a)anthracene (low level)	µg/l	0.002	-		11	0	0.002	0.58	-	-	-	0.070	0.040	0.13	< 0.0020	0.11	0.050	0.27	< 0.0020	0.58	0.090	0.070
Chrysene (low level)	µg/l	0.002	-		11	0	0.002	0.6	-	-	-	0.050	0.020	0.12	< 0.0020	0.070	0.050	0.30	< 0.0020	0.60	0.070	0.070
Di-bezno(a,h)anthracene (low level)	µg/l	0.002	-		11	0	0.002	0.14	-	-	-	< 0.0020	< 0.0020	< 0.0020	< 0.0020	0.020	< 0.0020	0.050	< 0.0020	0.14	< 0.0020	< 0.0020
			-																			
2,4,5-T	µg/l	0.02	-		3	0	0.02	0.02	-	-	-	< 0.02	< 0.02	< 0.02	-	-	-	-	-	-	-	-
2,4,5-TP	µg/l	0.02	-		3	0	0.02	0.02	-	-	-	< 0.02	< 0.02	< 0.02	-	-	-	-	-	-	-	-
2,4-D	µg/l	0.02	-		3	0	0.02	0.02	-	-	-	< 0.02	< 0.02	< 0.02	-	-	-	-	-	-	-	-
2,4-DB	µg/l	0.02	-		3	0	0.02	0.02	-	-	-	< 0.02	< 0.02	< 0.02	-	-	-	-	-	-	-	-
Dicamba	µg/l	0.02	-		3	0	0.02	0.02	-	-	-	< 0.02	< 0.02	< 0.02	-	-	-	-	-	-	-	-
Dichlorprop	µg/l	0.02	-		3	0	0.02	0.02	-	-	-	< 0.02	< 0.02	< 0.02	-	-	-	-	-	-	-	-
Dinoseb	µg/l	0.02	-		3	0	0.02	0.02	-	-	-	< 0.02	< 0.02	< 0.02	-	-	-	-	-	-	-	-
MCPA	µg/l	0.02	-		3	0	0.02	0.02	-	-	-	< 0.02	< 0.02	< 0.02	-	-	-	-	-	-	-	-
MCPB	µg/l	0.02	-		3	0	0.02	0.02	-	-	-	< 0.02	< 0.02	< 0.02	-	-	-	-	-	-	-	-
MCPP (Mecoprop)	µg/l	0.02	-		3	0	0.02	0.02	-	-	-	< 0.02	< 0.02	< 0.02	-	-	-	-	-	-	-	-
Picloram	µg/l	0.02	-		3	0	0.02	0.02	-	-	-	< 0.02	< 0.02	< 0.02	-	-	-	-	-	-	-	-
Bentazone	µg/l	0.02	-		3	0	0.02	0.02	-	-	-	< 0.02	< 0.02	< 0.02	-	-	-	-	-	-	-	-

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Soil	**SOM (%):**	1.0%
Land Use:	Allotment	**Completed By:**	KD
Receptor:	Human Health	**Checked By:**	PP

Assessment Criteria Key

a) LQM/CIEH S4UL
b) RHDHV GAC
c) CL:AIRE / EIC GAC
d) CL:AIRE / EIC & RHDHV GAC
e) DEFRA C4SL
f)
g)
h)

Contaminant	Units	Method Detection Limit	Assessment Criteria (AC)	Source (see key)	Summary Statistics: Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	Sample Identifiers and Analytical Data: HP101 0.00-0.25 08/07/2021	HP102 0.00-0.30 08/07/2021	HP103 0.00-0.15 08/07/2021	HP104 0.00-0.30 08/07/2021	HP105 0.00-0.20 08/07/2021	HP106 0.00-0.30 08/07/2021	HP107 0.00-0.30 08/07/2021	HP108 0.00-0.30 08/07/2021	HP109 0.00-0.15 08/07/2021	HP110 0.00-0.10 08/07/2021	HP Dup 1 one Supplie 08/07/2021
Asbestos in Soil	Type	N/A	-		0	0	#VALUE!	#VALUE!	-	-	-	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
			-																			
pH - Automated	pH Units	N/A	-		11	11	7.7	8	7.86363636	0.11200649	-	7.7	8	7.8	8	7.9	7.9	7.8	7.7	8	7.8	7.9
Ammoniacal Nitrogen as N	mg/kg	0.5	-		11	4	0.5	2.3	0.81818182	0.57239529	-	< 0.5	< 0.5	0.8	< 0.5	1	2.3	< 0.5	< 0.5	1.4	< 0.5	< 0.5
Total Organic Carbon (TOC)	%	0.1	-		11	11	4.8	8.1	6.46363636	1.13514116	-	6.3	6	8.1	4.8	4.8	6.3	5.8	8.1	6.4	7.4	7.1
			-																			
Total Phenols (monohydric)	mg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
			-																			
Naphthalene	mg/kg	0.05	4.1	a	11	11	0.58	18	4.22636364	5.55266472	2	2.7	1.8	2.4	2.3	1.4	1.1	3.3	0.91	0.58	18	12
Acenaphthylene	mg/kg	0.05	28	a	11	9	0.05	28	5.07818182	10.1652445	0	0.61	< 0.05	1.3	0.27	0.59	0.69	0.95	0.35	< 0.05	28	23
Acenaphthene	mg/kg	0.05	34	a	11	11	1.4	85	17.9272727	30.4506844	2	7.4	1.6	6.2	3.6	2.9	3.1	11	1.4	2	85	73
Fluorene	mg/kg	0.05	27	a	11	11	0.97	50	10.7245455	18.0696604	2	5.2	1	3.7	2	1.7	1.9	6.3	0.97	1.2	50	44
Phenanthrene	mg/kg	0.05	15	a	11	11	11	540	114.818182	189.97885	8	49	13	54	20	24	22	68	12	11	540	450
Anthracene	mg/kg	0.05	380	a	11	11	2.4	130	27.3454545	44.1609865	0	13	3.3	16	4.2	6.5	5.1	17	3.3	2.4	130	100
Fluoranthene	mg/kg	0.05	52	a	11	11	17	760	183.363636	265.891058	6	81	24	170	29	65	43	140	28	17	760	660
Pyrene	mg/kg	0.05	110	a	11	11	16	710	171.909091	244.8385	4	78	23	170	26	67	42	130	29	16	710	600
Benzo(a)anthracene	mg/kg	0.05	-		11	11	6.7	320	87.4272727	116.218364	-	41	14	97	14	39	22	83	15	6.7	320	310
Chrysene	mg/kg	0.05	4.1	a	11	11	6.3	270	71.6636364	90.2270721	11	39	12	94	14	33	22	64	14	6.3	270	220
Benzo(b)fluoranthene	mg/kg	0.05	-		11	11	7.3	310	92.2090909	113.974826	-	44	14	130	16	46	24	94	19	7.3	310	310
Benzo(k)fluoranthene	mg/kg	0.05	-		11	11	2.9	150	39.1545455	50.5491912	-	16	5.3	97	5.9	16	11	23	7.6	2.9	150	96
Benzo(a)pyrene	mg/kg	0.05	5.7	e	11	11	6.4	320	79.9454545	111.13412	11	37	12	62	13	39	22	72	16	6.4	320	280
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	-		11	11	2.8	150	37.8636364	52.0378376	-	14	5.8	42	5.9	17	9.8	31	8.2	2.8	150	130
Dibenz(a,h)anthracene	mg/kg	0.05	-		11	11	0.74	32	9.00363636	10.9829753	-	4.4	1.4	12	1.8	4.3	2.7	9.5	2.2	0.74	32	28
Benzo(ghi)perylene	mg/kg	0.05	-		11	11	3.3	180	44.8636364	63.36591	-	17	6.5	46	6.4	19	11	35	9.3	3.3	180	160
			-																			
Speciated Total EPA-16 PAHs	mg/kg	0.8	-		11	11	86.1	4040	994.190909	1404.21679	-	448	140	996	164	382	243	781	166	86.1	4040	3490
			-																			
Arsenic (aqua regia extractable)	mg/kg	1	49	e	11	11	16	83	59.5454545	17.935237	9	62	69	51	66	44	76	66	83	16	60	62
Barium (aqua regia extractable)	mg/kg	1	1300	c	11	11	56	610	313.272727	135.313777	0	310	230	610	220	330	330	410	310	56	360	280
Beryllium (aqua regia extractable)	mg/kg	0.06	35	a	11	11	1.2	1.9	1.55454545	0.26215887	0	1.7	1.9	1.5	1.3	1.2	1.8	1.9	1.4	1.2	1.7	1.5
Boron (water soluble)	mg/kg	0.2	45	a	11	11	0.3	1.3	0.79090909	0.28090762	0	1.1	0.7	0.7	0.5	0.6	1	0.3	0.9	1.3	0.8	0.8
Cadmium (aqua regia extractable)	mg/kg	0.2	3.9	e	11	7	0.2	3.4	1.76363636	1.31626192	0	2.4	3.1	2.6	2.7	1.6	3.4	2.8	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	170	e	11	0	1.2	1.2	-	-	0	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	18000	a	11	11	44	81	60.5454545	9.5850262	0	58	69	63	60	57	63	64	81	44	56	51
Chromium (aqua regia extractable)	mg/kg	1	-		11	11	45	82	60.9090909	9.65872192	-	58	69	63	61	57	64	64	82	45	56	51
Copper (aqua regia extractable)	mg/kg	1	520	a	11	11	38	340	268.909091	88.0970539	0	330	310	230	250	210	320	290	340	38	330	310
Lead (aqua regia extractable)	mg/kg	1	80	e	11	11	59	4400	1357.18182	1144.33446	10	1200	550	4400	520	1400	1100	2100	1200	59	1400	1000
Mercury (aqua regia extractable)	mg/kg	0.3	19	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	53	a	11	11	39	150	71.4545455	28.1828446	10	67	80	150	61	55	70	70	73	39	60	61
Selenium (aqua regia extractable)	mg/kg	1	88	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	91	a	11	11	65	85	71.8181818	6.46247912	0	67	70	65	68	67	85	82	76	69	71	70
Zinc (aqua regia extractable)	mg/kg	1	620	a	11	11	110	990	484.545455	250.813223	3	680	290	500	320	320	390	480	460	110	990	790
			-																			
Benzene	µg/kg	1	18	e	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	22000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	16000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	29000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	28000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	23000	c	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
			-																			
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	730	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	2300	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	320	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	2200	a	11	2	1	10	2.62727273	3.62052231	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.9	10
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	11000	a	11	6	2	27	10.1090909	9.32581949	0	18	< 2.0	12	< 2.0	7.2	< 2.0	14	< 2.0	< 2.0	27	23
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	-		11	8	8	110	35.9090909	33.6108749	-	35	< 8.0	21	< 8.0	28	16	59	21	< 8.0	81	110
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	-		11	10	8	730	295.454545	192.873204	-	180	320	92	210	340	270	290	330	< 8.0	480	730
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	-		11	10	10	870	340	231.257432	-	230	320	130	210	370	290	360	350	< 10	600	870
			-																			
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	13	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	22	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	8.6	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	13	a	11	9	1	46	10.2181818	13.3394766	2	4.4	5.6	11	6.9	4.6	3.8	5.1	< 1.0	< 1.0	46	23
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	23	a	11	11	8.3	230	57.3	72.2832622	8	30	27	42	24	26	19	31	8.3	23	230	170
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	46	a	11	11	52	1300	365.818182	452.484877	11	210	73	410	81	170	110	340	78	52	1200	1300
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	370	a	11	11	86	1300	509.636364	384.964225	6	380	200	790	200	430	270	680	270	86	1000	1300
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	-		11	11	160	2700	945.454545	889.295942	-	630	310	1300	310	630	400	1100	360	160	2500	2700
			-																			
Chloromethane	µg/kg	1	66	c	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/kg	1	110000	c	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Soil	**SOM (%):**	1.0%
Land Use:	Allotment	**Completed By:**	KD
Receptor:	Human Health	**Checked By:**	PP

Assessment Criteria Key

a) LQM/CIEH S4UL
b) RHDHV GAC
c) CL:AIRE / EIC GAC
d) CL:AIRE / EIC & RHDHV GAC
e) DEFRA C4SL
f)
g)
h)

Contaminant	Units	Method Detection Limit	Assessment Criteria (AC)	Source (see key)	Summary Statistics: Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	Sample Identifiers and Analytical Data: HP101 0.00-0.25 08/07/2021	HP102 0.00-0.30 08/07/2021	HP103 0.00-0.15 08/07/2021	HP104 0.00-0.30 08/07/2021	HP105 0.00-0.20 08/07/2021	HP106 0.00-0.30 08/07/2021	HP107 0.00-0.30 08/07/2021	HP108 0.00-0.30 08/07/2021	HP109 0.00-0.15 08/07/2021	HP110 0.00-0.10 08/07/2021	HP Dup 1 one Supplie 08/07/2021
Vinyl Chloride	µg/kg	1	1.7	e	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/kg	1	2900	c	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	260	c	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	23000	c	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	9200	c	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/kg	1	420	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	48000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	4.6	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	930	c	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/kg	1	18	e	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	450	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/kg	1	620	c	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	32	e	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	22000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	280	c	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	2000	e	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/kg	1	5900	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	790	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	16000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/kg	1	29000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/kg	1	1600	c	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/kg	1	28000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	410	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/kg	1	32000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/kg	1	3200	c	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/kg	1	34000	c	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	380	c	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/kg	1	250	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/kg	1	94000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/kg	1	15000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	55000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	4700	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
			-																			
Aniline	mg/kg	0.1	-		11	0	0.1	0.1	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	23	a	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	0.13	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	0.25	a	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	94	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	15	a	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	-		11	0	0.1	0.1	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	12	c	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	0.27	c	11	0	0.05	0.05	-	-	0	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	12	c	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	3.1	c	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	55	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Soil	**SOM (%):**	1.0%
Land Use:	Allotment	**Completed By:**	KD
Receptor:	Human Health	**Checked By:**	PP

Assessment Criteria Key

a) LQM/CIEH S4UL
b) RHDHV GAC
c) CL:AIRE / EIC GAC
d) CL:AIRE / EIC & RHDHV GAC
e) DEFRA C4SL
f)
g)
h)

Contaminant	Units	Method Detection Limit	Assessment Criteria (AC)	Source (see key)	Summary Statistics: Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	Sample Identifiers and Analytical Data: HP101 0.00-0.25 08/07/2021	HP102 0.00-0.30 08/07/2021	HP103 0.00-0.15 08/07/2021	HP104 0.00-0.30 08/07/2021	HP105 0.00-0.20 08/07/2021	HP106 0.00-0.30 08/07/2021	HP107 0.00-0.30 08/07/2021	HP108 0.00-0.30 08/07/2021	HP109 0.00-0.15 08/07/2021	HP110 0.00-0.10 08/07/2021	HP Dup 1 one Supplie 08/07/2021
Naphthalene	mg/kg	0.05	4.1	a	11	11	0.58	18	4.22636364	5.55266472	2	2.7	1.8	2.4	2.3	1.4	1.1	3.3	0.91	0.58	18	12
2,4-Dichlorophenol	mg/kg	0.3	0.13	a	11	0	0.3	0.3	-	-	11	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	-		11	0	0.1	0.1	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	-		11	0	0.1	0.1	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	-		11	0	0.1	0.1	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	0.13	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	-		11	2	0.1	29	4.9	10.7376906	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	29	24
2-Chloronaphthalene	mg/kg	0.1	-		11	0	0.1	0.1	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	-		11	0	0.1	0.1	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	0.12	c	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.05	28	a	11	8	0.05	23	2.53727273	6.79835582	0	0.61	< 0.05	1.3	0.27	0.59	0.69	0.95	0.35	< 0.05	< 0.05	23
Acenaphthene	mg/kg	0.05	34	a	11	11	1.4	85	17.9272727	30.4506844	2	7.4	1.6	6.2	3.6	2.9	3.1	11	1.4	2	85	73
2,4-Dinitrotoluene	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dibenzofuran	mg/kg	0.2	-		11	2	0.2	25	4.43636364	9.44915581	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	25	22
4-Chlorophenyl phenyl ether	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	19	c	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Nitroaniline	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Fluorene	mg/kg	0.05	27	a	11	11	0.97	50	10.7245455	18.0696604	2	5.2	1	3.7	2	1.7	1.9	6.3	0.97	1.2	50	44
Azobenzene	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	0.47	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene	mg/kg	0.05	15	a	11	11	11	540	114.818182	189.97885	8	49	13	54	20	24	22	68	12	11	540	450
Anthracene	mg/kg	0.05	380	a	11	11	2.4	130	27.3454545	44.1609865	0	13	3.3	16	4.2	6.5	5.1	17	3.3	2.4	130	100
Carbazole	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Dibutyl phthalate	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Fluoranthene	mg/kg	0.05	52	a	11	11	17	760	183.363636	265.891058	6	81	24	170	29	65	43	140	28	17	760	660
Pyrene	mg/kg	0.05	110	a	11	11	16	710	171.909091	244.8385	4	78	23	170	26	67	42	130	29	16	710	600
Butyl benzyl phthalate	mg/kg	0.3	220	c	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Benzo(a)anthracene	mg/kg	0.05	-		11	11	6.7	320	87.4272727	116.218364	-	41	14	97	14	39	22	83	15	6.7	320	310
Chrysene	mg/kg	0.05	4.1	a	11	11	6.3	270	71.6636364	90.2270721	11	39	12	94	14	33	22	64	14	6.3	270	220
Benzo(b)fluoranthene	mg/kg	0.05	-		11	11	7.3	310	92.2090909	113.974826	-	44	14	130	16	46	24	94	19	7.3	310	310
Benzo(k)fluoranthene	mg/kg	0.05	-		11	11	2.9	150	39.1545455	50.5491912	-	16	5.3	97	5.9	16	11	23	7.6	2.9	150	96
Benzo(a)pyrene	mg/kg	0.05	5.7	e	11	11	6.4	320	79.9454545	111.13412	11	37	12	62	13	39	22	72	16	6.4	320	280
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	-		11	11	2.8	150	37.8636364	52.0378376	-	14	5.8	42	5.9	17	9.8	31	8.2	2.8	150	130
Dibenz(a,h)anthracene	mg/kg	0.05	-		11	11	0.74	32	9.00363636	10.9829753	-	4.4	1.4	12	1.8	4.3	2.7	9.5	2.2	0.74	32	28
Benzo(ghi)perylene	mg/kg	0.05	-		11	11	3.3	180	44.8636364	63.36591	-	17	6.5	46	6.4	19	11	35	9.3	3.3	180	160
			-																			
2,3,6-TBA	µg/kg	50	-		3	0	50	50	-	-	-	< 50	< 50	< 50	-	-	-	-	-	-	-	-
2,4,5-T	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
2,4,5-TP (Fenoprop)	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
2,4-D	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
2,4-DB	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
4-CPA	µg/kg	20	-		3	0	20	20	-	-	-	< 20	< 20	< 20	-	-	-	-	-	-	-	-
Bromacil	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
Bromoxynil	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
Clopyralid	µg/kg	100	-		3	0	100	100	-	-	-	< 100	< 100	< 100	-	-	-	-	-	-	-	-
Dicamba	µg/kg	20	-		3	0	20	20	-	-	-	< 20	< 20	< 20	-	-	-	-	-	-	-	-
Diclofop	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
Dichlorprop	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
Dinoseb	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
Flamprop	µg/kg	50	-		3	0	50	50	-	-	-	< 50	< 50	< 50	-	-	-	-	-	-	-	-
Flamprop-Isopropyl	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
Ioxynil	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
MCPA	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
MCPB	µg/kg	20	-		3	0	20	20	-	-	-	< 20	< 20	< 20	-	-	-	-	-	-	-	-
MCPP (Mecoprop)	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
Picloram	µg/kg	50	-		3	0	50	50	-	-	-	< 50	< 50	< 50	-	-	-	-	-	-	-	-

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Soil	**SOM (%):**	1.0%
Land Use:	Public open space park	**Completed By:**	KD
Receptor:	Human Health	**Checked By:**	PP

Assessment Criteria Key

a) LQM/CIEH S4UL
b) RHDHV GAC
c) CL:AIRE / EIC GAC
d) CL:AIRE / EIC & RHDHV GAC
e) DEFRA C4SL
f)
g)
h)

Contaminant	Units	Method Detection Limit	Assess-ment Criteria (AC)	Source (see key)	Summary Statistics: Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	Sample Identifiers and Analytical Data: HP101 0.00-0.25 08/07/2021	HP102 0.00-0.30 08/07/2021	HP103 0.00-0.15 08/07/2021	HP104 0.00-0.30 08/07/2021	HP105 0.00-0.20 08/07/2021	HP106 0.00-0.30 08/07/2021	HP107 0.00-0.30 08/07/2021	HP108 0.00-0.30 08/07/2021	HP109 0.00-0.15 08/07/2021	HP110 0.00-0.10 08/07/2021	HP Dup 1 one Supplie 08/07/2021
Asbestos in Soil	Type	N/A	-		0	0	#VALUE!	#VALUE!	-	-	-	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected	Not-detected
			-																			
pH - Automated	pH Units	N/A	-		11	11	7.7	8	7.86363636	0.11200649	-	7.7	8	7.8	8	7.9	7.9	7.8	7.7	8	7.8	7.9
Ammoniacal Nitrogen as N	mg/kg	0.5	-		11	4	0.5	2.3	0.81818182	0.57239529	-	< 0.5	< 0.5	0.8	< 0.5	1	2.3	< 0.5	< 0.5	1.4	< 0.5	< 0.5
Total Organic Carbon (TOC)	%	0.1	-		11	11	4.8	8.1	6.46363636	1.13514116	-	6.3	6	8.1	4.8	4.8	6.3	5.8	8.1	6.4	7.4	7.1
			-																			
Total Phenols (monohydric)	mg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
			-																			
Naphthalene	mg/kg	0.05	1200	a	11	11	0.58	18	4.22636364	5.55266472	0	2.7	1.8	2.4	2.3	1.4	1.1	3.3	0.91	0.58	18	12
Acenaphthylene	mg/kg	0.05	29000	a	11	9	0.05	28	5.07818182	10.1652445	0	0.61	< 0.05	1.3	0.27	0.59	0.69	0.95	0.35	< 0.05	28	23
Acenaphthene	mg/kg	0.05	29000	a	11	11	1.4	85	17.9272727	30.4506844	0	7.4	1.6	6.2	3.6	2.9	3.1	11	1.4	2	85	73
Fluorene	mg/kg	0.05	20000	a	11	11	0.97	50	10.7245455	18.0696604	0	5.2	1	3.7	2	1.7	1.9	6.3	0.97	1.2	50	44
Phenanthrene	mg/kg	0.05	6200	a	11	11	11	540	114.818182	189.97885	0	49	13	54	20	24	22	68	12	11	540	450
Anthracene	mg/kg	0.05	150000	a	11	11	2.4	130	27.3454545	44.1609865	0	13	3.3	16	4.2	6.5	5.1	17	3.3	2.4	130	100
Fluoranthene	mg/kg	0.05	6300	a	11	11	17	760	183.363636	265.891058	0	81	24	170	29	65	43	140	28	17	760	660
Pyrene	mg/kg	0.05	15000	a	11	11	16	710	171.909091	244.8385	0	78	23	170	26	67	42	130	29	16	710	600
Benzo(a)anthracene	mg/kg	0.05	-		11	11	6.7	320	87.4272727	116.218364	-	41	14	97	14	39	22	83	15	6.7	320	310
Chrysene	mg/kg	0.05	93	a	11	11	6.3	270	71.6636364	90.2270721	3	39	12	94	14	33	22	64	14	6.3	270	220
Benzo(b)fluoranthene	mg/kg	0.05	-		11	11	7.3	310	92.2090909	113.974826	-	44	14	130	16	46	24	94	19	7.3	310	310
Benzo(k)fluoranthene	mg/kg	0.05	-		11	11	2.9	150	39.1545455	50.5491912	-	16	5.3	97	5.9	16	11	23	7.6	2.9	150	96
Benzo(a)pyrene	mg/kg	0.05	10	e	11	11	6.4	320	79.9454545	111.13412	10	37	12	62	13	39	22	72	16	6.4	320	280
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	-		11	11	2.8	150	37.8636364	52.0378376	-	14	5.8	42	5.9	17	9.8	31	8.2	2.8	150	130
Dibenz(a,h)anthracene	mg/kg	0.05	-		11	11	0.74	32	9.00363636	10.9829753	-	4.4	1.4	12	1.8	4.3	2.7	9.5	2.2	0.74	32	28
Benzo(ghi)perylene	mg/kg	0.05	-		11	11	3.3	180	44.8636364	63.36591	-	17	6.5	46	6.4	19	11	35	9.3	3.3	180	160
			-																			
Speciated Total EPA-16 PAHs	mg/kg	0.8	-		11	11	86.1	4040	994.190909	1404.21679	-	448	140	996	164	382	243	781	166	86.1	4040	3490
			-																			
Arsenic (aqua regia extractable)	mg/kg	1	170	e	11	11	16	83	59.5454545	17.935237	0	62	69	51	66	44	76	66	83	16	60	62
Barium (aqua regia extractable)	mg/kg	1	-		11	11	56	610	313.272727	135.313777	-	310	230	610	220	330	330	410	310	56	360	280
Beryllium (aqua regia extractable)	mg/kg	0.06	63	a	11	11	1.2	1.9	1.55454545	0.26215887	0	1.7	1.9	1.5	1.3	1.2	1.8	1.9	1.4	1.2	1.7	1.5
Boron (water soluble)	mg/kg	0.2	46000	a	11	11	0.3	1.3	0.79090909	0.28090762	0	1.1	0.7	0.7	0.5	0.6	1	0.3	0.9	1.3	0.8	0.8
Cadmium (aqua regia extractable)	mg/kg	0.2	880	e	11	7	0.2	3.4	1.76363636	1.31626192	0	2.4	3.1	2.6	2.7	1.6	3.4	2.8	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	250	e	11	0	1.2	1.2	-	-	0	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	33000	a	11	11	44	81	60.5454545	9.5850262	0	58	69	63	60	57	63	64	81	44	56	51
Chromium (aqua regia extractable)	mg/kg	1	-		11	11	45	82	60.9090909	9.65872192	-	58	69	63	61	57	64	64	82	45	56	51
Copper (aqua regia extractable)	mg/kg	1	44000	a	11	11	38	340	268.909091	88.0970539	0	330	310	230	250	210	320	290	340	38	330	310
Lead (aqua regia extractable)	mg/kg	1	1300	e	11	11	59	4400	1357.18182	1144.33446	4	1200	550	4400	520	1400	1100	2100	1200	59	1400	1000
Mercury (aqua regia extractable)	mg/kg	0.3	240	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	800	a	11	11	39	150	71.4545455	28.1828446	0	67	80	150	61	55	70	70	73	39	60	61
Selenium (aqua regia extractable)	mg/kg	1	1800	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	5000	a	11	11	65	85	71.8181818	6.46247912	0	67	70	65	68	67	85	82	76	69	71	70
Zinc (aqua regia extractable)	mg/kg	1	170000	a	11	11	110	990	484.545455	250.813223	0	680	290	500	320	320	390	480	460	110	990	790
			-																			
Benzene	µg/kg	1	230000	e	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	87000000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	17000000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-xylene	µg/kg	1	17000000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-xylene	µg/kg	1	17000000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
			-																			
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	95000	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	150000	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	14000	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	21000	a	11	2	1	10	2.62727273	3.62052231	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	9.9	10
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	25000	a	11	6	2	27	10.1090909	9.32581949	0	18	< 2.0	12	< 2.0	7.2	< 2.0	14	< 2.0	< 2.0	27	23
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	-		11	8	8	110	35.9090909	33.6108749	-	35	< 8.0	21	< 8.0	28	16	59	21	< 8.0	81	110
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	-		11	10	8	730	295.454545	192.873204	-	180	320	92	210	340	270	290	330	< 8.0	480	730
TPH-CWG - Aliphatic (EC5 - EC35)	mg/kg	10	-		11	10	10	870	340	231.257432	-	230	320	130	210	370	290	360	350	< 10	600	870
			-																			
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	76000	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	87000	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	7200	a	11	0	0.001	0.001	-	-	0	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	9200	a	11	9	1	46	10.2181818	13.3394766	0	4.4	5.6	11	6.9	4.6	3.8	5.1	< 1.0	< 1.0	46	23
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	10000	a	11	11	8.3	230	57.3	72.2832622	0	30	27	42	24	26	19	31	8.3	23	230	170
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	7600	a	11	11	52	1300	365.818182	452.484877	0	210	73	410	81	170	110	340	78	52	1200	1300
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	7800	a	11	11	86	1300	509.636364	384.964225	0	380	200	790	200	430	270	680	270	86	1000	1300
TPH-CWG - Aromatic (EC5 - EC35)	mg/kg	10	-		11	11	160	2700	945.454545	889.295942	-	630	310	1300	310	630	400	1100	360	160	2500	2700
			-																			
Chloromethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chloroethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromomethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Soil	**SOM (%):**	1.0%
Land Use:	Public open space park	**Completed By:**	KD
Receptor:	Human Health	**Checked By:**	PP

Assessment Criteria Key

a) LQM/CIEH S4UL
b) RHDHV GAC
c) CL:AIRE / EIC GAC
d) CL:AIRE / EIC & RHDHV GAC
e) DEFRA C4SL
f)
g)
h)

Contaminant	Units	Method Detection Limit	Assessment Criteria (AC)	Source (see key)	Summary Statistics: Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	Sample Identifiers and Analytical Data: HP101 0.00-0.25 08/07/2021	HP102 0.00-0.30 08/07/2021	HP103 0.00-0.15 08/07/2021	HP104 0.00-0.30 08/07/2021	HP105 0.00-0.20 08/07/2021	HP106 0.00-0.30 08/07/2021	HP107 0.00-0.30 08/07/2021	HP108 0.00-0.30 08/07/2021	HP109 0.00-0.15 08/07/2021	HP110 0.00-0.10 08/07/2021	HP Dup 1 one Supplie 08/07/2021
Vinyl Chloride	µg/kg	1	18000	e	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichlorofluoromethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloro 1,2,2-Trifluoroethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,2-dichloroethene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloroethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2,2-Dichloropropane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloromethane	µg/kg	1	2600000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1-Trichloroethane	µg/kg	1	57000000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloroethane	µg/kg	1	21000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1-Dichloropropene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,2-dichloroethene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzene	µg/kg	1	230000	e	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloromethane	µg/kg	1	190000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichloropropane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trichloroethene	µg/kg	1	41000	e	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromomethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromodichloromethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cis-1,3-dichloropropene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Trans-1,3-dichloropropene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Toluene	µg/kg	1	87000000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2-Trichloroethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichloropropane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dibromochloromethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tetrachloroethene	µg/kg	1	1400000	e	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromoethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chlorobenzene	µg/kg	1	1300000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	µg/kg	1	1500000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	µg/kg	1	17000000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p & m-Xylene	µg/kg	1	17000000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Styrene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Tribromomethane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	µg/kg	1	17000000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,1,2,2-Tetrachloroethane	µg/kg	1	1800000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Isopropylbenzene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Bromobenzene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
n-Propylbenzene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
2-Chlorotoluene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
4-Chlorotoluene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3,5-Trimethylbenzene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
tert-Butylbenzene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trimethylbenzene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
sec-Butylbenzene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,3-Dichlorobenzene	µg/kg	1	390000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
p-Isopropyltoluene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene	µg/kg	1	24000000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,4-Dichlorobenzene	µg/kg	1	36000000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Butylbenzene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dibromo-3-chloropropane	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,4-Trichlorobenzene	µg/kg	1	1700000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Hexachlorobutadiene	µg/kg	1	-		11	0	1	1	-	-	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2,3-Trichlorobenzene	µg/kg	1	770000	a	11	0	1	1	-	-	0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
			-																			
Aniline	mg/kg	0.1	-		11	0	0.1	0.1	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	mg/kg	0.2	440	a	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Chlorophenol	mg/kg	0.1	1100	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	390	a	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	24000	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	36000	a	11	0	0.2	0.2	-	-	0	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	-		11	0	0.1	0.1	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2-Methylphenol	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Hexachloroethane	mg/kg	0.05	-		11	0	0.05	0.05	-	-	-	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nitrobenzene	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Methylphenol	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Isophorone	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Nitrophenol	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	1700	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Soil	**SOM (%):**	1.0%
Land Use:	Public open space park	**Completed By:**	KD
Receptor:	Human Health	**Checked By:**	PP

Assessment Criteria Key

a) LQM/CIEH S4UL
b) RHDHV GAC
c) CL:AIRE / EIC GAC
d) CL:AIRE / EIC & RHDHV GAC
e) DEFRA C4SL
f)
g)
h)

Contaminant	Units	Method Detection Limit	Assess-ment Criteria (AC)	Source (see key)	Summary Statistics: Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	Sample Identifiers and Analytical Data: HP101 0.00-0.25 08/07/2021	HP102 0.00-0.30 08/07/2021	HP103 0.00-0.15 08/07/2021	HP104 0.00-0.30 08/07/2021	HP105 0.00-0.20 08/07/2021	HP106 0.00-0.30 08/07/2021	HP107 0.00-0.30 08/07/2021	HP108 0.00-0.30 08/07/2021	HP109 0.00-0.15 08/07/2021	HP110 0.00-0.10 08/07/2021	HP Dup 1 one Supplie 08/07/2021
Naphthalene	mg/kg	0.05	1200	a	11	11	0.58	18	4.22636364	5.55266472	0	2.7	1.8	2.4	2.3	1.4	1.1	3.3	0.91	0.58	18	12
2,4-Dichlorophenol	mg/kg	0.3	1100	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
4-Chloroaniline	mg/kg	0.1	-		11	0	0.1	0.1	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Hexachlorobutadiene	mg/kg	0.1	-		11	0	0.1	0.1	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	-		11	0	0.1	0.1	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	1100	a	11	0	0.1	0.1	-	-	0	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
2-Methylnaphthalene	mg/kg	0.1	-		11	2	0.1	29	4.9	10.7376906	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	29	24
2-Chloronaphthalene	mg/kg	0.1	-		11	0	0.1	0.1	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dimethylphthalate	mg/kg	0.1	-		11	0	0.1	0.1	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	-		11	0	0.1	0.1	-	-	-	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	0.05	29000	a	11	8	0.05	23	2.53727273	6.79835582	0	0.61	< 0.05	1.3	0.27	0.59	0.69	0.95	0.35	< 0.05	< 0.05	23
Acenaphthene	mg/kg	0.05	29000	a	11	11	1.4	85	17.9272727	30.4506844	0	7.4	1.6	6.2	3.6	2.9	3.1	11	1.4	2	85	73
2,4-Dinitrotoluene	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Dibenzofuran	mg/kg	0.2	-		11	2	0.2	25	4.43636364	9.44915581	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	25	22
4-Chlorophenyl phenyl ether	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Diethyl phthalate	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
4-Nitroaniline	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Fluorene	mg/kg	0.05	20000	a	11	11	0.97	50	10.7245455	18.0696604	0	5.2	1	3.7	2	1.7	1.9	6.3	0.97	1.2	50	44
Azobenzene	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexachlorobenzene	mg/kg	0.3	30	a	11	0	0.3	0.3	-	-	0	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Phenanthrene	mg/kg	0.05	6200	a	11	11	11	540	114.818182	189.97885	0	49	13	54	20	24	22	68	12	11	540	450
Anthracene	mg/kg	0.05	150000	a	11	11	2.4	130	27.3454545	44.1609865	0	13	3.3	16	4.2	6.5	5.1	17	3.3	2.4	130	100
Carbazole	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Dibutyl phthalate	mg/kg	0.2	-		11	0	0.2	0.2	-	-	-	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Anthraquinone	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Fluoranthene	mg/kg	0.05	6300	a	11	11	17	760	183.363636	265.891058	0	81	24	170	29	65	43	140	28	17	760	660
Pyrene	mg/kg	0.05	15000	a	11	11	16	710	171.909091	244.8385	0	78	23	170	26	67	42	130	29	16	710	600
Butyl benzyl phthalate	mg/kg	0.3	-		11	0	0.3	0.3	-	-	-	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Benzo(a)anthracene	mg/kg	0.05	-		11	11	6.7	320	87.4272727	116.218364	-	41	14	97	14	39	22	83	15	6.7	320	310
Chrysene	mg/kg	0.05	93	a	11	11	6.3	270	71.6636364	90.2270721	3	39	12	94	14	33	22	64	14	6.3	270	220
Benzo(b)fluoranthene	mg/kg	0.05	-		11	11	7.3	310	92.2090909	113.974826	-	44	14	130	16	46	24	94	19	7.3	310	310
Benzo(k)fluoranthene	mg/kg	0.05	-		11	11	2.9	150	39.1545455	50.5491912	-	16	5.3	97	5.9	16	11	23	7.6	2.9	150	96
Benzo(a)pyrene	mg/kg	0.05	11	e	11	11	6.4	320	79.9454545	111.13412	10	37	12	62	13	39	22	72	16	6.4	320	280
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	-		11	11	2.8	150	37.8636364	52.0378376	-	14	5.8	42	5.9	17	9.8	31	8.2	2.8	150	130
Dibenz(a,h)anthracene	mg/kg	0.05	-		11	11	0.74	32	9.00363636	10.9829753	-	4.4	1.4	12	1.8	4.3	2.7	9.5	2.2	0.74	32	28
Benzo(ghi)perylene	mg/kg	0.05	-		11	11	3.3	180	44.8636364	63.36591	-	17	6.5	46	6.4	19	11	35	9.3	3.3	180	160
			-																			
2,3,6-TBA	µg/kg	50	-		3	0	50	50	-	-	-	< 50	< 50	< 50	-	-	-	-	-	-	-	-
2,4,5-T	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
2,4,5-TP (Fenoprop)	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
2,4-D	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
2,4-DB	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
4-CPA	µg/kg	20	-		3	0	20	20	-	-	-	< 20	< 20	< 20	-	-	-	-	-	-	-	-
Bromacil	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
Bromoxynil	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
Clopyralid	µg/kg	100	-		3	0	100	100	-	-	-	< 100	< 100	< 100	-	-	-	-	-	-	-	-
Dicamba	µg/kg	20	-		3	0	20	20	-	-	-	< 20	< 20	< 20	-	-	-	-	-	-	-	-
Diclofop	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
Dichlorprop	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
Dinoseb	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
Flamprop	µg/kg	50	-		3	0	50	50	-	-	-	< 50	< 50	< 50	-	-	-	-	-	-	-	-
Flamprop-Isopropyl	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
Ioxynil	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
MCPA	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
MCPB	µg/kg	20	-		3	0	20	20	-	-	-	< 20	< 20	< 20	-	-	-	-	-	-	-	-
MCPP (Mecoprop)	µg/kg	10	-		3	0	10	10	-	-	-	< 10	< 10	< 10	-	-	-	-	-	-	-	-
Picloram	µg/kg	50	-		3	0	50	50	-	-	-	< 50	< 50	< 50	-	-	-	-	-	-	-	-

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Surface Water		
Land Use:	EQS	**Completed By:**	KD
Receptor:	Controlled Waters	**Checked By:**	PP

Assessment Criteria Key

a) WFD inland surface waters 2015
b) EQS Freshwater (older EQS values)
c) M-BAT Tool

Contaminant	Units	Method Detection Limit	Assess-ment Criteria (AC)	Source (see key)	Summary Statistics							Sample Identifiers and Analytical Data			
					Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	SW101			
												08/07/2021			
pH	pH Units	N/A	6 to 9	a	1	1	7.6	7.6	7.6	-	0	7.6			
Sulphate as SO4	mg/l	0.045	-		1	1	16.3	16.3	16.3	-	-	16.3			
Ammoniacal Nitrogen as N	µg/l	15	200	a	1	1	120	120	120	-	0	120			
Dissolved Organic Carbon (DOC)	mg/l	0.1	-		1	1	4.16	4.16	4.16	-	-	4.16			
Alkalinity as CaCO3	mg/l	3	-		1	1	54	54	54	-	-	54			
			-												
Phenol	µg/l	0.05	7.7	a	1	0	0.05	0.05	-	-	0	< 0.05			
2,4,5-Trichlorophenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2,4,6-Trichlorophenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2,4-Dichlorophenol	µg/l	0.05	0.3	a	1	0	0.05	0.05	-	-	0	< 0.05			
2,4-Dimethylphenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2-Chlorophenol	µg/l	0.05	50	a	1	0	0.05	0.05	-	-	0	< 0.05			
2-Methylphenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2-Nitrophenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
4-Chloro-3-methylphenol	µg/l	0.05	40	a	1	0	0.05	0.05	-	-	0	< 0.05			
4-Methylphenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
			-												
Total Phenols (GC-MS)	µg/l	0.5	-		1	0	0.5	0.5	-	-	-	< 0.5			
			-												
Boron (dissolved)	µg/l	10	2000	a	1	1	120	120	120	-	0	120			
Calcium (dissolved)	mg/l	0.012	-		1	1	21	21	21	-	-	21			
Chromium (hexavalent)	µg/l	5	3.4	a	1	0	5	5	-	-	1	< 5.0			
Chromium (III)	µg/l	1	4.7	a	1	1	1.4	1.4	1.4	-	0	1.4			
			-												
Arsenic (dissolved)	µg/l	0.15	50	a	1	1	2.71	2.71	2.71	-	0	2.71			
Barium (dissolved)	µg/l	0.06	-		1	1	60	60	60	-	-	60			
Beryllium (dissolved)	µg/l	0.1	-		1	0	0.1	0.1	-	-	-	< 0.1			
Cadmium (dissolved)	µg/l	0.02	0.08	a	1	0	0.02	0.02	-	-	0	< 0.02			
Chromium (dissolved)	µg/l	0.2	-		1	1	1.4	1.4	1.4	-	-	1.4			
Copper (dissolved)	µg/l	0.5	17.1	c	1	1	8.8	8.8	8.8	-	0	8.8			
Lead (dissolved)	µg/l	0.2	4.99	c	1	1	8.4	8.4	8.4	-	1	8.4			
Mercury (dissolved)	µg/l	0.05	0.07	b	1	0	0.05	0.05	-	-	0	< 0.05			
Nickel (dissolved)	µg/l	0.5	9.58	c	1	1	2.5	2.5	2.5	-	0	2.5			
Selenium (dissolved)	µg/l	0.6	-		1	0	0.6	0.6	-	-	-	< 0.6			
Vanadium (dissolved)	µg/l	0.2	20	a	1	1	1.4	1.4	1.4	-	0	1.4			
Zinc (dissolved)	µg/l	0.5	24.66	c	1	1	25	25	25	-	1	25			
			-												
Benzene	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
Toluene	µg/l	1	74	a	1	0	1	1	-	-	0	< 1.0			
Ethylbenzene	µg/l	1	20	a	1	0	1	1	-	-	0	< 1.0			
p & m-xylene	µg/l	1	30	a	1	0	1	1	-	-	0	< 1.0			
o-xylene	µg/l	1	30	a	1	0	1	1	-	-	0	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
			-												
TPH-CWG - Aliphatic >C5 - C6	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
TPH-CWG - Aliphatic >C6 - C8	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
TPH-CWG - Aliphatic >C8 - C10	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
TPH-CWG - Aliphatic >C10 - C12	µg/l	10	10	a	1	0	10	10	-	-	0	< 10			
TPH-CWG - Aliphatic >C12 - C16	µg/l	10	10	a	1	0	10	10	-	-	0	< 10			
TPH-CWG - Aliphatic >C16 - C21	µg/l	10	10	a	1	0	10	10	-	-	0	< 10			
TPH-CWG - Aliphatic >C21 - C35	µg/l	10	10	a	1	0	10	10	-	-	0	< 10			
TPH-CWG - Aliphatic (C5 - C35)	µg/l	10	-		1	0	10	10	-	-	-	< 10			
			-												
TPH-CWG - Aromatic >C5 - C7	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
TPH-CWG - Aromatic >C7 - C8	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
TPH-CWG - Aromatic >C8 - C10	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
TPH-CWG - Aromatic >C10 - C12	µg/l	10	10	a	1	0	10	10	-	-	0	< 10			
TPH-CWG - Aromatic >C12 - C16	µg/l	10	10	a	1	0	10	10	-	-	0	< 10			
TPH-CWG - Aromatic >C16 - C21	µg/l	10	10	a	1	0	10	10	-	-	0	< 10			
TPH-CWG - Aromatic >C21 - C35	µg/l	10	10	a	1	0	10	10	-	-	0	< 10			
TPH-CWG - Aromatic (C5 - C35)	µg/l	10	-		1	0	10	10	-	-	-	< 10			
			-												
Chloromethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Chloroethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Bromomethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Vinyl Chloride	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Trichlorofluoromethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,1-Dichloroethene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Cis-1,2-dichloroethene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
MTBE (Methyl Tertiary Butyl Ether)	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Surface Water		
Land Use:	EQS	**Completed By:**	KD
Receptor:	Controlled Waters	**Checked By:**	PP

Assessment Criteria Key
a) WFD inland surface waters 2015
b) EQS Freshwater (older EQS values)
c) M-BAT Tool

Contaminant	Units	Method Detection Limit	Assess-ment Criteria (AC)	Source (see key)	Summary Statistics							Sample Identifiers and Analytical Data			
					Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	SW101			
												08/07/2021			
1,1-Dichloroethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
2,2-Dichloropropane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Trichloromethane	µg/l	1	2.5	a	1	0	1	1	-	-	0	< 1.0			
1,1,1-Trichloroethane	µg/l	1	100	a	1	0	1	1	-	-	0	< 1.0			
1,2-Dichloroethane	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
1,1-Dichloropropene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Trans-1,2-dichloroethene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Benzene	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
Tetrachloromethane	µg/l	1	12	a	1	0	1	1	-	-	0	< 1.0			
1,2-Dichloropropane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Trichloroethene	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
Dibromomethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Bromodichloromethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Cis-1,3-dichloropropene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Trans-1,3-dichloropropene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Toluene	µg/l	1	74	a	1	0	1	1	-	-	0	< 1.0			
1,1,2-Trichloroethane	µg/l	1	400	a	1	0	1	1	-	-	0	< 1.0			
1,3-Dichloropropane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Dibromochloromethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Tetrachloroethene	µg/l	1	10	a	1	0	1	1	-	-	0	< 1.0			
1,2-Dibromoethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Chlorobenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,1,1,2-Tetrachloroethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Ethylbenzene	µg/l	1	20	a	1	0	1	1	-	-	0	< 1.0			
p & m-Xylene	µg/l	1	30	a	1	0	1	1	-	-	0	< 1.0			
Styrene	µg/l	1	50	a	1	0	1	1	-	-	0	< 1.0			
Tribromomethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
o-Xylene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,1,2,2-Tetrachloroethane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Isopropylbenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Bromobenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
n-Propylbenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
2-Chlorotoluene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
4-Chlorotoluene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,3,5-Trimethylbenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
tert-Butylbenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,2,4-Trimethylbenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
sec-Butylbenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,3-Dichlorobenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
p-Isopropyltoluene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,2-Dichlorobenzene	µg/l	1	20	a	1	0	1	1	-	-	0	< 1.0			
1,4-Dichlorobenzene	µg/l	1	20	a	1	0	1	1	-	-	0	< 1.0			
Butylbenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,2-Dibromo-3-chloropropane	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
1,2,4-Trichlorobenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
Hexachlorobutadiene	µg/l	1	0.6	a	1	0	1	1	-	-	1	< 1.0			
1,2,3-Trichlorobenzene	µg/l	1	-		1	0	1	1	-	-	-	< 1.0			
			-												
Aniline	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Phenol	µg/l	0.05	7.7	a	1	0	0.05	0.05	-	-	0	< 0.05			
2-Chlorophenol	µg/l	0.05	50	a	1	0	0.05	0.05	-	-	0	< 0.05			
Bis(2-chloroethyl)ether	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
1,3-Dichlorobenzene	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
1,2-Dichlorobenzene	µg/l	0.05	20	a	1	0	0.05	0.05	-	-	0	< 0.05			
1,4-Dichlorobenzene	µg/l	0.05	20	a	1	0	0.05	0.05	-	-	0	< 0.05			
Bis(2-chloroisopropyl)ether	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2-Methylphenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Hexachloroethane	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Nitrobenzene	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
4-Methylphenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Isophorone	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2-Nitrophenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2,4-Dimethylphenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Bis(2-chloroethoxy)methane	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
1,2,4-Trichlorobenzene	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Naphthalene	µg/l	0.01	2	a	1	0	0.01	0.01	-	-	0	< 0.01			
2,4-Dichlorophenol	µg/l	0.05	0.3	a	1	0	0.05	0.05	-	-	0	< 0.05			
4-Chloroaniline	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Hexachlorobutadiene	µg/l	0.05	0.6	a	1	0	0.05	0.05	-	-	0	< 0.05			
4-Chloro-3-methylphenol	µg/l	0.05	40	a	1	0	0.05	0.05	-	-	0	< 0.05			
2,4,6-Trichlorophenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			

Data Summary Statistics

Site:	Castlefield Viaduct	**Project No:**	PC2387
Data Description:	Surface Water		
Land Use:	EQS	**Completed By:**	KD
Receptor:	Controlled Waters	**Checked By:**	PP

Assessment Criteria Key
a) WFD inland surface waters 2015
b) EQS Freshwater (older EQS values)
c) M-BAT Tool

Contaminant	Units	Method Detection Limit	Assess-ment Criteria (AC)	Source (see key)	Summary Statistics							Sample Identifiers and Analytical Data			
					Total Number of Samples	Results Above Detection Limit	Minimum	Maximum	Arithmetic Mean	Standard Deviation	Number of results >AC	SW101			
												08/07/2021			
2,4,5-Trichlorophenol	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2-Methylnaphthalene	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
2-Chloronaphthalene	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Dimethylphthalate	µg/l	0.05	800	a	1	0	0.05	0.05	-	-	0	< 0.05			
2,6-Dinitrotoluene	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Acenaphthylene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
Acenaphthene	µg/l	0.01	-		1	1	0.02	0.02	0.02	-	-	0.02			
2,4-Dinitrotoluene	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Dibenzofuran	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
4-Chlorophenyl phenyl ether	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Diethyl phthalate	µg/l	0.05	200	a	1	0	0.05	0.05	-	-	0	< 0.05			
4-Nitroaniline	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Fluorene	µg/l	0.01	-		1	1	0.03	0.03	0.03	-	-	0.03			
Azobenzene	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Bromophenyl phenyl ether	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Hexachlorobenzene	µg/l	0.05	0.05	a	1	0	0.05	0.05	-	-	0	< 0.05			
Phenanthrene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
Anthracene	µg/l	0.01	0.1	a	1	0	0.01	0.01	-	-	0	< 0.01			
Carbazole	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Dibutyl phthalate	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Anthraquinone	µg/l	0.05	-		1	0	0.05	0.05	-	-	-	< 0.05			
Fluoranthene	µg/l	0.01	0.0063	a	1	1	0.02	0.02	0.02	-	1	0.02			
Pyrene	µg/l	0.01	-		1	1	0.01	0.01	0.01	-	-	0.01			
Butyl benzyl phthalate	µg/l	0.05	7.5	a	1	0	0.05	0.05	-	-	0	< 0.05			
Benzo(a)anthracene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
Chrysene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
Benzo(b)fluoranthene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
Benzo(k)fluoranthene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
Benzo(a)pyrene	µg/l	0.01	0.00017	a	1	0	0.01	0.01	-	-	1	< 0.01			
Indeno(1,2,3-cd)pyrene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
Dibenz(a,h)anthracene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
Benzo(ghi)perylene	µg/l	0.01	-		1	0	0.01	0.01	-	-	-	< 0.01			
			-												
3&4-Methylphenol	µg/l	0.1	-		1	0	0.1	0.1	-	-	-	< 0.10			
			-												
Fluoranthene (low level)	µg/l	0.002	0.0063	a	1	1	0.02	0.02	0.02	-	1	0.02			
Benzo(b)fluoranthene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.002			
Benzo(k)fluoranthene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.002			
Benzo(a)pyrene (low level)	µg/l	0.002	0.00017	a	1	0	0.002	0.002	-	-	1	< 0.002			
Indeno(1,2,3-cd)pyrene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.002			
Benzo(ghi)perylene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.002			
Naphthalene (low level)	µg/l	0.002	2	a	1	0	0.002	0.002	-	-	0	< 0.0020			
Acenaphthylene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.0020			
Acenaphthene (low level)	µg/l	0.002	-		1	1	0.02	0.02	0.02	-	-	0.02			
Fluorene (low level)	µg/l	0.002	-		1	1	0.03	0.03	0.03	-	-	0.03			
Phenanthrene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.0020			
Antracene (low level)	µg/l	0.002	0.1	a	1	0	0.002	0.002	-	-	0	< 0.0020			
Pyrene (low level)	µg/l	0.002	-		1	1	0.01	0.01	0.01	-	-	0.01			
Benzo(a)anthracene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.0020			
Chrysene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.0020			
Di-bezno(a,h)anthracene (low level)	µg/l	0.002	-		1	0	0.002	0.002	-	-	-	< 0.0020			

Appendix

Appendix E – Limitations

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Limitations

The direct assessments and judgements given in this report are limited by both the finite data on which they are based and the proposed works to which they are addressed. The acquisition of data is constrained by both physical and economic factors and, by definition, is subject to limitations. Conditions at the site will change over time due to natural variations and may be affected by human activities.

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The findings and opinions are relevant to the dates of the information reviewed and should not be relied upon to represent conditions at later dates. The opinions included herein are based on the information obtained from the assessments undertaken in the study area and from the experience of the reviewers.

This Phase II Land Quality Assessment has utilised a variety of publicly available data sources such as the Environment Agency, Groundsure, historical maps and the British Geological Survey. Therefore, the study is limited by the age and limitations inherent in the data described.



Royal HaskoningDHV is an independent, international engineering and project management consultancy with over 138 years of experience. Our professionals deliver services in the fields of aviation, buildings, energy, industry, infrastructure, maritime, mining, transport, urban and rural development and water.

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We focus on delivering added value for our clients while at the same time addressing the challenges that societies are facing. These include the growing world population and the consequences for towns and cities; the demand for clean drinking water, water security and water safety; pressures on traffic and transport; resource availability and demand for energy and waste issues facing industry.

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